

Construction Selector



- Fire Ratings
- Acoustical Performance
- Product/System Index
- Specification Standards

Introduction

USG Corporation companies offer a wide range of quality products and performance-engineered systems to meet specialized requirements for modern building design. The manufacture of these products to carefully controlled standards insures uniform quality. This *Construction Selector* covers products and systems from two USG Corporation companies:

United States Gypsum Company manufactures gypsum products, cement board panels, and related components for high-performance systems. In addition, the Company markets steel studs, runners and accessories manufactured by Unimast Incorporated as integral components for plaster and gypsum board systems. The Company has been a leader in the building industry since its founding in 1902.

USG Interiors, Inc. manufactures commercial ceiling products, relocatable partitions, access floor systems, and mineral fiber insulation for building construction. The Company offers the widest product range in the industry and has the unique capability to market integrated interior systems.

The USG Research Center, largest and most advanced in the industry, continually develops new products and high-performance systems which are designed to provide improved function and utility while reducing construction time and cost. Products and systems are marketed only after thorough testing and field trial.

United States Gypsum Company and USG Interiors, Inc. employ technical service and sales representatives to help design professionals gain maximum performance from materials and systems by advising on selection, proper detailing and specification. See the back cover for the location nearest you.

Contents

The USG Architectural Reference Library has a format suited for the architect's use—organized by function and end result—to save time in locating technical information and improve results. It is arranged for quick comparison of functional properties and separated to isolate concise data on each major construction system and product.

This *Construction Selector* is the key reference index to the USG Architectural Reference Library. It summarizes fire-rated construction and acoustical performance data of various systems for quick comparison and selection. Cross-references are provided to the System Folders having complete description, installation details and specifications. Product Folders provide technical data on components used in construction systems.

The table below gives the sequence of folders comprising the USG Architectural Reference Library. The numeral before each division title indicates the CSI MASTERFORMAT Division classification. Copies of all folders listed are available through Company sales offices.

The System Folders and Product Folders are arranged in numerical sequence. The first numeral in the title number is the appropriate division number (two digits for two-digit division numbers) so that folders are easily filed.

Folder No. & Title	Section No.
Div. 5/Metals	
UN-30 Steel Framing Systems: Technical Information	05400
Div. 7/Thermal & Moisture Protection	
SA-700 DUROCK Exterior Cement Board Systems	07240
SA-707 THERMAFIBER Life Safety Fire Containment Systems	07200
SA-727 USG Fire Stop Systems for Floor and Wall Penetrations	07270
Div. 9/Finishes	
SA-904 DONN Ceiling Suspension Systems	09120
SA-905 Ceiling Systems	09500
SA-906 INTEGRATED CEILINGS Specialty Products	09500
SA-907 INTEGRATED CEILINGS Special Order Products	09500
SA-920 Plaster Products, Systems & Accessories	09200
SA-921 USG High Sound-Attenuation Steel Framed Systems	09250
SA-923 Drywall/Steel Framed Systems	09250
SA-923-A New 2-Hr. and 4-Hr. Fire-Rated Steel Framed Systems	09250
SA-924 Drywall/Wood Framed Systems	09250
SA-925 USG Area Separation Wall Systems	09250
SA-926 USG Cavity Shaft Wall Systems	09250
SA-927 Gypsum Panels & Accessories	09250
SA-928 TEXTONE Vinyl-Faced Gypsum Panels	09985
SA-932 DUROCK Interior Cement Board Systems	09390
SA-933 Texture and Finish Products	09800
Div. 10/Specialties	
SA-1020 Wall Systems	10615
SA-1027 DONN Access Floor Systems	10270
Div. 11/Equipment	
SA-1119 STRUCTOCORE Security Wall Systems	11190

How to Use this Selector

This folder is divided into nine sections—A to I—covering the categories indicated below. Within the first seven sections are listed brief analyses as documented by fire or sound tests, federal specifications or ASTM designations, or other pertinent criteria. They usually are arranged sequentially according to fire ratings—the criterion that most often governs selection.

The analyses applicable to each system, as listed in the sections A to G, are repeated in the individual folder covering that system, indicated by number in the "Folder Reference" column.

- A Partitions**—pages 6 to 15—include mechanically fastened and laminated assemblies, steel and wood-framed, load bearing and non-load bearing—in gypsum base and veneer finishes, gypsum drywall, cement board and conventional lath and plaster.
- B Ceilings**—pages 16 to 25—include suspended, furred and direct-attachment types, employing drywall, veneer finishes, conventional plaster and mineral fiber tile or panel surfaces with companion floor or roof construction.
- C Structural fireproofing**—pages 26 to 28—shows basic methods of protecting columns and beams with gypsum base and veneer finishes, mineral fireproofing and gypsum drywall.
- D Exterior walls**—pages 29 and 30—includes load-bearing wood and steel stud systems and exterior curtain wall assemblies.
- E Exterior wall furring**—pages 30 and 31—compares methods of furring exterior walls, including veneer and conventional plaster and drywall furring systems.
- F Curtain walls**—pages 31 and 32—covers glass, aluminum and granite spandrel panels, other metal-faced wall assemblies and glass-fiber reinforced concrete panels.
- G Access floor systems**—pages 32 and 33—shows structural performance of panels and understructures for offices and computer rooms.
- H Product and system catalogs**—page 34—provides a brief description of each catalog in the Architectural Reference Library.
- I Products/specification standards**—pages 35 and 36—Federal specification and ASTM designation qualifications of USG Corporation products; UL designations; code research reports; and NER listings.

Test Conditions and Certification

Fire and sound tested assemblies listed in this *Selector* are based on characteristics, properties, and performance of materials and systems obtained under controlled test conditions as set forth in the appropriate ASTM Standard in effect at the time of test. These listings are short summaries to serve as a compilation and guide of construction assemblies available in the selection process. For complete information on construction details and component products used in these systems, refer to the individual Folder reference.

USG Corporation will provide test certification for published fire, sound and structural data covering systems designed and constructed according to its published specifications. Tests are conducted on Company products assembled to meet performance requirements of established test procedures specified by various agencies. System performance following any substitution of materials or compromise in assembly design cannot be certified and may result in failure under critical conditions.

Sound tests are conducted under ideal laboratory conditions according to ASTM procedures. Comparable field performance depends on building design and careful attention to detailing and workmanship.

Certain sound tests, conducted in accordance with ASTM methods, measured sound transmission of 11 frequencies. These

data have been retained in this selector to serve as a guide to the designer. Based on experience, the STC values are very close to those obtained for the assembly under current methods at 16 frequencies.

Sound ratings shown for steel-framed partitions apply to systems constructed with 25-ga. steel studs, unless otherwise noted. Heavier gauge studs are more rigid and may not provide the same sound ratings.

Abbreviations

In the test analyses following, abbreviation of "est" indicates estimated; abbreviation N/A indicates not applicable or not available. Estimated fire ratings are based on an engineering evaluation by qualified professionals. Other abbreviations are shown below.

acoust	acoustical	ht	height
alt	alternate	insul	insulating or insulation
alum	aluminum	int	interior
appl	applied	lamin	laminated
ASTM	Amer. Soc. Testing Materials	lbr	lumber
att	attached	lightwt	lightweight
atten	attenuation	lim	limiting
betw	between	max	maximum
bd	board	met	metal
blks	blankets	min	minimal or minimum
cem	cement	nom	nominal
chan	channel	noncomb	noncombustible
clg	ceiling	o.c.	on center
col	column	opp	opposite
com	common	oz	ounce
conc	concrete	partn	partition
contin	continuous	perim	perimeter
conv	conventional	plywd	plywood
corrug	corrugated	prot	protected or protection
cr	cold rolled	qtr	quarter
ctd	coated	recom	recommended
dbl	double	reg	regular
Des	Design	rel	relocatable
ea	each	resil	resilient
exp	exposed	run	runner(s)
extendg	extending	SAFB	sound attenuation fire blankets
fin	finish or finished	sep	separate
fireprtg	fireproofing	separ	separated
fixt	fixture	stag	staggered
flr	floor	stl	steel
freq	frequency	subflr	subfloor
ft	foot or feet	susp	suspended or suspension
furr	furring	syst	system
ga	gauge	thickn	thickness
GA	Gypsum Association	unfin	unfinished
galv	galvanized	USG	USG Corporation
hex	hexagonal	vert	vertically
horiz	horizontally	wd	wood
hr	hour	wt	weight (lb./sq. ft.)

Details

In details, color background designates materials indicated below:

	Sound-deadening material; column or beam fireproofing.
	RC-1™ Resilient Channels.
	Furring channels.

Laboratories

Fire

UL—Underwriters Laboratories Inc.
 OSU—Ohio State University
 U of C—University of California
 WHI—Warnock Hersey International
 CEG—Consulting Engineers Group
 GA—Gypsum Assoc. Fire Design Manual GA-600

Sound

TL—Riverbank Acoustical Laboratories
 G & H—Geiger & Hamme
 CK—Cedar Knolls Acoust. Laboratories
 BBN—Bolt, Beranek and Newman
 KSO—Kenward S. Oliphant
 KAL—Kodaras Acoustical Laboratories
 SA—Shiner & Assoc.

Sound rating

STC	sound transmission class per ASTM test procedures	IIC	impact insulation class per ASTM test procedures
clg. STC range	sound transmission class per AMA 1-II test procedure	MTC	music/machinery transmission class—see folder SA-921

Index to Products and Systems

Product or System Folder Reference

A
 Accessories, structural & trimSA-920, SA-927
 Access floor systemsSA-1027
 Acoustical ceiling finish, spraySA-933
 Acoustical insulationSA-707
 Acoustical sealantSA-927
 Acoustical tiles, panels, bafflesSA-905
 Acrylic ceilings, wallsSA-906
 Adhesives, ceramic tileSA-932
 Adhesives, drywallSA-927
 Air distribution for access floorsSA-1027
 Aluminum foil-backed boardsSA-920, SA-927
 Area separation wallsSA-925
 ASTM Specspage 31, SA-100

B
 Back-blocking systemSA-924
 Basecoat plasterSA-920
 Brick veneer curtain wallsSA-700
 Building insulationSA-707

C
 Caged beam constructionSA-920, SA-923
 Cavity shaft wallsSA-926
 Ceiling air diffusersSA-904, SA-906
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 Ceiling texture finishesSA-933
 Cement board, exteriorSA-700
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 Concrete finishing compoundSA-920, SA-927
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E
 Electrical systems for access floorsSA-1027
 Epoxy matrix exterior finishSA-700
 Exterior curtain wallsSA-700, SA-923
 Exterior insulation & finish systemSA-700
 Exterior walls and ceilingsSA-700, SA-905, SA-923, SA-924

Product or System Folder Reference

F
 Fabric bannersSA-906
 Fabric-covered acoustical panelsSA-906
 Fabric-covered wallsSA-906
 Federal Specspage 31, SA-100
 Finishing limeSA-920
 Fireproofing, mineral feltSA-707
 Fire safety systemsSA-707
 Firestop system, walls & floorsSA-727
 Fire-wall systemsSA-925
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G
 Gauging plastersSA-920
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 Grout, ceramic tileSA-700, SA-932
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 Gypsum lath ceilingsSA-920
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J
 Joint treatmentSA-927
 Joists, load bearing steelUN-30

L
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 Light fixture protectionSA-905
 Lime, hydratedSA-920
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M
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References listed are *principal source* of information in this Architectural Technical Literature series. Repetition or additional data may occur in other folders.

Product or System Folder Reference

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 Pedestals, access floorSA-1027
 Plaster basesSA-920
 Plaster ceilingsSA-920
 Plaster furring systemsSA-920
 Plaster partitions, steel-framedSA-920
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S
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 Tape, reinforcingSA-920, SA-927
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Index to UL Designs

This Index lists all UL Designs that involve the products of the United States Gypsum Company and USG Interiors, Inc. UL Design numbers appear with their corresponding references, the UL Fire Resistance Directory or the *Construction Selector* section letter and

number. For example, UL Design D215 is referenced to B-73, that is, test no. 73 in Section B of the *Construction Selector*; UL Design D216 is not in the *Construction Selector* but is described in the UL Directory.

UL Des. No.	Ref.	UL Des. No.	Ref.	UL Des. No.	Ref.	UL Des. No.	Ref.	UL Des. No.	Ref.	UL Des. No.	Ref.
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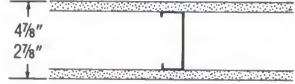



Selector Guide to Sound-Rated Partitions⁽¹⁾

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(1) Assemblies are identified by numbers in right outside margin, 1 to 104, pages 6 through 15.

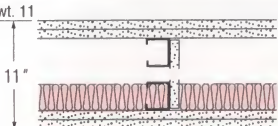
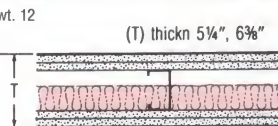
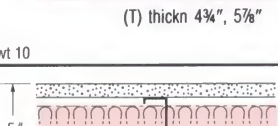
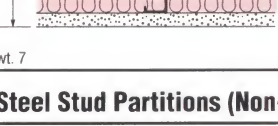


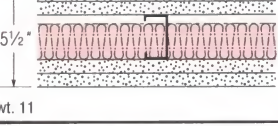

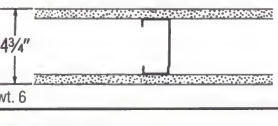

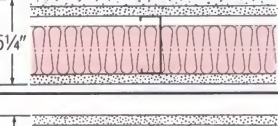
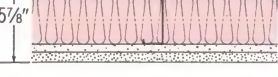
Fire-rated construction		Acoustical performance		Folder reference
Detail & physical data	Description & test no.	STC	Description & test no.	

Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster Steel Stud Partitions (Non-Load Bearing) – 1-Hour Rating

	wt. 6	Steel Stud— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core— $\frac{3}{8}$ " studs 24" o.c.—single layer panels vert appl & screw att—joints stag & fin—perimeter caulked— UL Des U465 —based on panels vert or horiz appl— GA-WP-1200	40 49 51	USG-860808 Based on 3" SAFB in cavity panels— SA-870717 Based on FIRECODE C core panels and 3" SAFB 25" wide, creased to fit cavity— TL-90-166	SA-923	1
	wt. 5	Steel Stud— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core— $\frac{1}{2}$ " studs 24" o.c.—single layer panels vert appl & screw att 12" o.c.—joints fin—perimeter caulked— U of C 7-31-62	38	USG-860809	SA-923	2
	wt. 8	Steel Stud—veneer plaster only (not drywall) $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base & veneer finish— $2\frac{1}{2}$ " studs—base screw att—joints stag & taped— $\frac{1}{4}$ " veneer finish—perimeter caulked—stud spacing at 16" recommended— GA-WP-1240	45	Based on 3 $\frac{3}{4}$ " studs 24" o.c. with 1" SAFB in cavity— CK-664-1	SA-920	3
	wt. 5	Steel Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $2\frac{1}{2}$ " studs 24" o.c.—single layer panels ea side appl vert & screw att— $1\frac{1}{2}$ " THERMAFIBER SAFB—joints fin—perimeter caulked— UL Des U448	45 48	TL-69-42 Based on 3 $\frac{3}{4}$ " studs & 2" SAFB— SA-800422	SA-923	4
	wt. 6	Steel Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core— $2\frac{1}{2}$ " studs 24" o.c.— $1\frac{1}{2}$ " THERMAFIBER SAFB—panels apply horiz & screw att—joints opp—vert joints unfin—horiz joints fin— CEG 8-11-83 —rating also applies to assembly with $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, and panels and joints fin— CEG 5-9-84	47	SA-831001	SA-923	5
	wt. 7	Steel Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $2\frac{1}{2}$ " studs 24" o.c.—single layer panels one side appl vert & screw att— $1\frac{1}{2}$ " THERMAFIBER SAFB one side—2 layers opp side—panels appl vert & screw att—joints stag & fin—perimeter caulked—est. fire rating based on T-3362-OSU	50 41	SA-800504 Based on same construction without SAFB— TL-69-148	SA-923	6
	wt. 9	Steel Stud—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, ea side— $1\frac{1}{2}$ " studs 24" o.c.—panels appl vert & screw att—joints stag & fin—perimeter caulked— U of C 9-21-64	54	Based on SHEETROCK brand gypsum panels, FIRECODE C core, $2\frac{1}{2}$ " studs & $1\frac{1}{2}$ " SAFB— CK-654-40	SA-923	7
	wt. 7	Steel Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $1\frac{1}{2}$ " studs 24" o.c.—2 layers—base layer $\frac{1}{4}$ " SHEETROCK brand gypsum panels, screw att— $\frac{1}{2}$ " face layer screw att—joints fin—perimeter caulked— GA-WP-1090	53	Based on $1\frac{1}{2}$ " SAFB & $2\frac{1}{2}$ " studs— CK-684-13	SA-923	8
		Alternate based on $2\frac{1}{2}$ " studs & $\frac{1}{2}$ " face layer laminated— GA-WP-1051	53	NGC-2318	SA-923	9
		Alternate based on $2\frac{1}{2}$ " studs & face layer of $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core— GA-WP-1015	55	Based on $1\frac{1}{2}$ " SAFB— CK-684-14	SA-923	10
		Alternate based on $2\frac{1}{2}$ " studs & base layer of $\frac{3}{8}$ " SHEETROCK brand gypsum panels— GA-WP-1053	54	CK-810402	SA-923	11

Steel Stud Partitions (Non-Load Bearing) – 2-Hour Rating

	wt. 10	Steel Stud—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ea side— $1\frac{1}{2}$ ", $2\frac{1}{2}$ " or $3\frac{1}{2}$ " studs 24" o.c.—optional $1\frac{1}{2}$ ", $1\frac{1}{2}$ " or $2\frac{1}{2}$ " THERMAFIBER SAFB stapled—panels appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints fin—perim caulked—rating based on assembly with or without SAFB— UL Des U412	50 55 52 54	Based on 3 $\frac{3}{4}$ " stud assembly without SAFB— USG-840817 Based on 3 $\frac{3}{4}$ " studs and $1\frac{1}{2}$ " SAFB— SA-800421 Based on lamin. face layer, $1\frac{1}{2}$ " SAFB and $2\frac{1}{2}$ " studs— SA-860932 Based on $2\frac{1}{2}$ " studs, screw att face layer and $1\frac{1}{2}$ " SAFB— CK-654-40	SA-923 UN-30	12
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Fire-rated construction		Acoustical performance		Folder reference
Detail & physical data	Description & test no.	STC	Description & test no.	
Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster (continued)				
Steel Stud Partitions (Non-Load Bearing) – 2-Hour Rating				
wt. 11 	Steel Stud Chase Wall—2 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, ea side—1 1/2" studs 24" o.c. in 2 rows spaced 5 1/2" apart—1/2" gypsum panel gussets spanning chase att to studs at qtr points—panels appl vert & screw att—1 1/2" THERMAFIBER SAFB one side—joints stag & fin—perimeter caulked—est. fire rating based on UL Des U412	55	SA-860907	SA-923 13
wt. 12 	Steel Stud—2 layers 1/2" IMPERIAL FIRECODE gypsum base & veneer finish—2 1/2" or 3" studs 24" o.c.—base layer screw att—face layer lamin or screw att—joints taped—1/4" veneer finish—UL Des U411	47 51	Based on 2 1/2" studs—TL-75-73 Based on 2 1/2" studs and 1 1/2" SAFB in cavity—TL-75-70	SA-920 14
	Steel Stud—2 layers 1/2" IMPERIAL FIRECODE C gypsum base & veneer finish—2 1/2" or 3" studs 24" o.c.—optional 2" THERMAFIBER SAFB stapled one side—base appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints taped—1/4" veneer finish—perimeter caulked—rating based on assembly with or without SAFB—UL Des U412	53	Based on assembly with 2 1/2" studs and 1" SAFB—CK-654-66	SA-920 15
wt. 10 	Steel stud—3/4" SHEETROCK brand gypsum Panels, ULTRACODE C core, ea. side—3 1/2" or 3" studs 24" o.c.—3" THERMAFIBER SAFB—panels vert appl & screw att 8" o.c. perm, 12" o.c. field—joints stag & fin—perimeter caulked—UL Des U491	50	USG-910617	SA-923-A 16
Steel Stud Partitions (Non-Load Bearing) – 3-Hour Rating				
wt. 13 	Steel Stud—3 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, ea side—1 1/2" studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten fire blankets—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—UL Des U435	59	Based on assembly with 1 1/2" SAFB in cavity—SA-830112	SA-920 17 SA-923 UN-30
Steel Stud Partitions (Non-Load Bearing) – 4-Hour Rating				
wt. 17 	Steel Stud—4 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, ea side—1 1/2" studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten fire blankets—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—UL Des U435	62	Based on assembly with 1 1/2" SAFB in cavity—SA-830113	SA-920 18 SA-923 UN-30
wt. 11 	Steel Stud—2 layers 3/4" SHEETROCK brand gypsum panels, ULTRACODE core, ea side—2 1/2" studs 24" o.c.—2" THERMAFIBER SAFB—base layer app vert, panels vertl, joints stag & screw att 24" o.c.—face layer app vert or horiz, screw att 12" o.c.—att along horiz joints with Type G screws betw framing (24" o.c.)—joints fin—perimeter caulked—UL Des U490	56	SA-910907	SA-923-A 19
Steel Stud Partitions (Load Bearing) – 45-Minute Rating				
wt. 6 	1/2" SHEETROCK brand gypsum panels, FIRECODE C core—35SJ20 studs 24" o.c.—panels appl vert & att with 1" Type S-12 screws 12" o.c.—joints fin—load bearing up to 100% allowable stud axial load—UL Des U425	47	Based on 3" SAFB in cavity—SA-861001	SA-923 20 UN-30
Steel Stud Partitions (Load Bearing) – 1-Hour Rating				
wt. 6 	Load-bearing Steel Stud—1/2" SHEETROCK brand gypsum panels, FIRECODE core—35SJ20 studs 24" o.c.—panels appl vert & att with 1" Type S-12 screws 12" o.c.—joints stag & fin—load bearing up to 100% allowable stud axial load—UL Des U425	40 41	USG-810519 Based on 2" SAFB in cavity—USG-810518	SA-923 21 UN-30
wt. 10 	Dbl layer 1/2" SHEETROCK brand gypsum panels, FIRECODE C core—35SJ20 studs 24" o.c.—1", 1 1/2", 2", or 3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw att to studs—panels appl vert with joints stag—base layer att with 1" Type S-12 screws 12" o.c.—face layer att with 1 1/2" Type S-12 screws 12" o.c.—joints fin—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—load bearing up to 100% allowable stud axial load—UL Des U440	61 51	Based on 35SJ16 studs, 3/8" thick panels, lateral bracing and 3" SAFB—SA-830628 Based on 35SJ16 studs and lateral bracing—SA-840715	SA-923 22 UN-30
wt. 10 	Steel Stud—1/2" DUROCK interior cement board—base layer 1/2" SHEETROCK brand gypsum panels, FIRECODE core—3 1/2" studs 16" o.c.—3" THERMAFIBER SAFB—board att with 1" DUROCK screws 8" o.c.—joints taped—UL Des U473	N/A		SA-932 23
wt. 10 	1/2" SHEETROCK brand gypsum panels, FIRECODE C core—base layer 1/2" DUROCK interior cement board—board att with 1" DUROCK screws 24" o.c.—3 1/2" studs 16" o.c.—3" THERMAFIBER SAFB—UL Des U485	N/A		SA-932 24

Fire-rated construction

Detail & physical data

Description & test no.

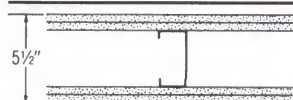
Acoustical performance

STC Description & test no.

Folder reference

Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster (continued)

Steel Stud Partitions (Load Bearing) – 1½-Hour Rating



wt. 9

Load-bearing Steel Stud—Dbl layer ½" SHEETROCK brand gypsum panels, FIRECODE C core—35SJ20 studs 24" o.c.—panels appl vert—base layer att with 1" Type S-12 screws 12" o.c.—face layer att with 1½" Type S-12 screws 12" o.c.—joints fin—load bearing up to 100% allowable axial load—UL Des U425

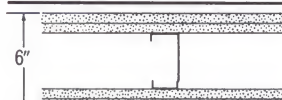
49
49

Based on 2" SAFB—USG-811009
Based on 2" SAFB and 60SJ20 studs—USG-810940

SA-923
UN-30

25

Steel Stud Partitions (Load Bearing) – 2-Hour Rating



wt. 10

Dbl layer ½" SHEETROCK brand gypsum panels, FIRECODE core—35SJ20 studs 24" o.c.—panels appl vert—base layer att with 1" Type S-12 screws 12" o.c.—face layer att with 1½" Type S-12 screws 12" o.c.—joints fin—load bearing up to 80% allowable stud axial load—UL Des U425

48
49

Based on 2" SAFB in cavity—USG-811006
Based on 2" SAFB and 60SJ20 stud—USG-810937

SA-923
UN-30

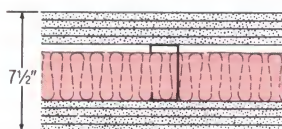
26

Alternate based on three layers ½" SHEETROCK brand gypsum panels, FIRECODE C core—load bearing up to 100% allowable stud axial load—UL Des U425

SA-923

27

Steel Stud Partitions (Load Bearing) – 3-Hour Rating



wt. 18

Four layers ½" SHEETROCK brand gypsum panels, FIRECODE C core, ea side—35SJ20 studs 24" o.c.—1", 1½", 2" or 3" THERMAFIBER SAFB optional—base layers appl vert with joints stag—base panels att with Type S-12 screws 48" o.c.—face layer appl vert or horiz with 2½" Type S-12 screws 12" o.c. and 1½" Type G screws in panels—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—load bearing up to 100% allowable stud axial load—UL Des U426

N/A

SA-923
UN-30

28

Resilient/Steel Stud Partitions – 1-Hour Rating



wt. 6

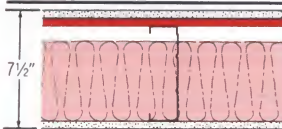
Resil Stud Drywall—½" SHEETROCK brand gypsum panels, FIRECODE C core—362SJ20 studs 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—single-layer gypsum panels screw-att to studs & RC-1 chan—panels appl vert with joints stag—joints fin—perimeter caulked—UL Des U451

50
54
55
55
54

RAL-TL-87-156 (42 MTC)
Based on ¾" thick panels—**RAL-TL-83-216** (47 MTC)
Based on ½" IMPERIAL FIRECODE gypsum base & creased 3" SAFB—**SA-860635**
Based on ½" SHEETROCK brand gypsum panels, FIRECODE core, & on 25" wide creased SAFB—**SA-850415**
Based on ½" SHEETROCK brand gypsum panels, FIRECODE core, & 24" wide creased SAFB—**USG-850409**

SA-921
SA-920
SA-923

29



wt. 6

Resil Stud Drywall—½" SHEETROCK brand gypsum panels, FIRECODE C core—60SJ20 studs 24" o.c.—5" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—single-layer gypsum panels screw-att to studs & RC-1 chan—panels appl vert with joints stag—joints fin—perimeter caulked—UL Des U451

56
56

RAL-TL-87-139 (48 MTC)
Based on ¾" thick panels—**RAL-TL-84-141** (50 MTC)

SA-921

30



wt. 10

Dbl layer ½" SHEETROCK brand gypsum panels, FIRECODE C core—35SJ20 studs 24" o.c.—1", 1½", 2", or 3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—panels appl vert with joints stag—base layer att with 1" Type S-12 screws 12" o.c.—face layer att with 1½" Type S-12 screws 12" o.c.—joints fin—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—load bearing up to 100% allowable stud axial load—UL Des U440

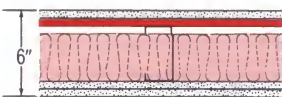
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51

Based on 35SJ16 studs, ¾" thick panels, lateral bracing and 3" SAFB—**SA-830628**
Based on 35SJ16 studs and lateral bracing—**SA-840715**

SA-923
UN-30

31

Resilient/Steel Stud Partitions – 1½-Hour Rating



wt. 8

Resil Stud Drywall—½" SHEETROCK brand gypsum panels, FIRECODE C core—362SJ20 studs 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—single-layer gypsum panels screw-att to studs, 1 layer screw-att to chan—panels appl vert with joints stag—joints fin—perimeter caulked—UL Des U452

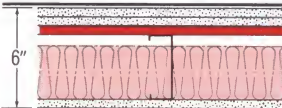
58
59

RAL-TL-83-215 (52 MTC)
8¾" wall with 60SJ20 studs & 5" SAFB—**RAL-TL-84-140** (54 MTC)

SA-921

32

Resilient/Steel Stud Partitions – 2-Hour Rating



wt. 9

Resil Stud Drywall—½" SHEETROCK brand gypsum panels, FIRECODE C core—362SJ20 studs 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—2 layers gypsum panels screw-att to studs, 2-layers screw-att to chan—panels appl vert with joints stag—joints fin—perimeter caulked—UL Des U453

58
60
59

Estimated sound test (52 MTC)
Based on ¾" thick panels, 60SJ20 studs, 5" SAFB—**RAL-TL-87-140** (54 MTC)
Based on ¾" thick panels, 60SJ20 studs, 5" SAFB—**RAL-TL-84-136** (54 MTC)


SA-921

33

Fire-rated construction		Acoustical performance		Folder reference
Detail & physical data	Description & test no.	STC	Description & test no.	

Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster (continued)

Steel Stud Partitions (Load Bearing) – 2-Hour Rating

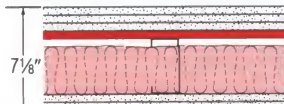
	Resil Stud Drywall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—362SJ20 studs 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—2 layers gypsum panels screw-att to chan, 2 layers screw-att to chan—panels appl vert with joints stag—joints fin—perimeter caulked— UL Des U454	60	RAL-TL-87-154 (54 MTC)	SA-921 UN-30	34
		61	Based on $\frac{1}{2}$ " thick panels— RAL-TL-83-214 (57 MTC)		
		57	Based on 2 $\frac{1}{2}$ " 25-ga. studs, 1" SAFB and $\frac{1}{2}$ " thick panels— USG-871207		
		63	Based on 60SJ20 studs & 5" SAFB— RAL-TL-87-141 (59 MTC)		
		62	Based on $\frac{1}{2}$ " thick panels, 60SJ20 studs & 5" SAFB— RAL-TL-84-139 (58 MTC)		

wt. 10

Resilient/Steel Stud Partitions – 3-Hour Rating

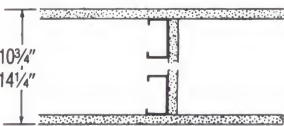
	Resil Stud Drywall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—362SJ20 studs 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—3 layers gypsum panels screw-att to studs, 2 layers screw-att to chan—panels appl vert with joints stag—joints fin—perimeter caulked— UL Des U455	61	RAL-TL-87-153 (56 MTC)	SA-921	35
		62	Based on $\frac{1}{2}$ " thick panels— RAL-TL-83-213 (59 MTC)		
		64	Based on 60SJ20 studs & 5" SAFB— RAL-TL-87-142 (59 MTC)		
		63	Based on $\frac{1}{2}$ " thick panels, 60SJ20 studs & 5" SAFB— RAL-TL-84-138 (59 MTC)		
		65	Based on $\frac{1}{2}$ " thick panels, 60SJ20 studs, 5" SAFB, acoustical sealant bead between panels and studs, dabs 8" o.c. between panel layers on stud side— RAL-TL-84-150 (60 MTC)		

wt. 12

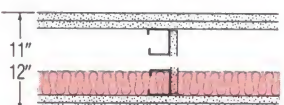
	Resil Stud Drywall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—362SJ20 studs 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c. screw-att to studs—3 layers gypsum panels screw-att to studs, 3 layers screw-att to chan—panels appl vert with joints stag—joints fin—perimeter caulked— UL Des U455	63	RAL-TL-87-152 (58 MTC)	SA-921 UN-30	36
		65	60SJ20 studs, 5" SAFB RAL-TL-87-143 (61 MTC)		

wt. 14

Steel/Stud Double Wall Chases – 1-Hour Rating

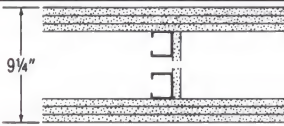
	Steel Stud Chase Wall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, ea side—1 $\frac{1}{2}$ " studs 24" o.c. in 2 rows spaced 6 $\frac{1}{2}$ " apart— $\frac{1}{2}$ " gypsum panel gussets or steel run braces spanning chase screw-att to studs—panels applied vert & screw att—joints stag & fin— UL Des U420	52	Based on 3 $\frac{1}{2}$ " insulation one side— TL-76-155	SA-923	37
	Steel Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ea side— fireproofed steel truss —2 $\frac{1}{2}$ " studs 24" o.c. in 2 rows spaced 8" apart— $\frac{1}{2}$ " gypsum panel gussets spanning chase att to stud at qtr & ctr points—panels appl vert & screw-att—joints stag & fin—includes 3-hr. truss— UL Des U805	N/A		SA-923	38

Steel/Stud Double Wall Chases – 2-Hour Rating

	Steel Stud Chase Wall—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ea side—1 $\frac{1}{2}$ " studs 24" o.c. in 2 rows spaced 5 $\frac{1}{2}$ " apart— $\frac{1}{2}$ " gypsum panel gussets spanning chase att to studs at qtr points—panels appl vert & screw att—1 $\frac{1}{2}$ " THERMAFIBER SAFB one side—joints stag & fin—perimeter caulked—est. fire rating based on UL Des U412	55	SA-860907	SA-923	39
	Steel Stud Chase Wall—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, ea side—1 $\frac{1}{2}$ " studs 24" o.c. in 2 rows spaced 6 $\frac{1}{4}$ " apart— $\frac{1}{2}$ " gypsum panel gussets or stl run braces spanning chase screw-att to studs—panels appl vert & screw att—joints stag & fin— UL Des U420	52 57	TL-76-162 Based on 3 $\frac{1}{2}$ " insulation one side— TL-76-156	SA-923	40

wt. 12

Steel/Stud Double Wall Chases – 3-Hour Rating

	Steel Stud—3 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ea side—1 $\frac{1}{2}$ " studs 24" o.c. in 2 rows spaced 3" apart—steel truss member—gypsum panel gussets or stl run braces spanning chase screw-att to studs—panels appl vert & screw att—joints stag & fin—2 hr. rating applies with 2 layers panels ea side—1 hr. rating applies with single layer $\frac{1}{2}$ " panels ea side— UL Des U436	N/A		SA-923	41
	Double Wall Drywall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—two rows of 1" SHEETROCK brand gypsum liner panels spaced 3 $\frac{1}{2}$ " apart and screw-att to steel angle runners—liner panels set betw 1" H-splines 24" o.c.—3" THERMAFIBER SAFB in cavity—face panels screw-att to H-splines—perim caulked—joints fin— UL Des U441	57 60 62	TL-83-211 (MTC 57) TL-83-313 (MTC 57) Based on vertical cnltrline acoust sealant beads TL-83-232 (MTC 60) Based on liner panels spaced 6 $\frac{1}{2}$ ", 6" SAFB in cavity, and vertical cnltrline acoust sealant beads Based on liner panels spaced 12 $\frac{1}{2}$ ", 12" SAFB in cavity, and vertical cnltrline acoust sealant beads— TL-83-229 (MTC 62)	SA-921	42

wt. 13

Fire-rated construction

Detail & physical data

Description & test no.

Acoustical performance

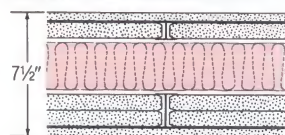
STC

Description & test no.

Folder reference

Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster (continued)

Steel Stud/Double Wall Chases – 3-Hour Rating



Double Wall Drywall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—one row of single-layer, one row of double-layer
1" SHEETROCK brand gypsum liner panels spaced $3\frac{1}{2}$ " apart and screw-att to steel angle runners—single-layer liner panels set betw 1" H-splines 24" o.c., double-layer liner panels set betw 2" H-splines 24" o.c.—3" THERMAFIBER SAFB in cavity—face panels screw-att to H-splines—perim caulked—joints fin—**UL Des U441**

63

66

69

TL-83-222 (MTC 58)

Based on liner panels spaced $6\frac{1}{2}$ ", 6" SAFB in cavity, and vertical cntrline acoust sealant beads—**TL-83-231** (MTC 61)
Based on liner panels spaced 12", 12" SAFB in cavity, and vertical cntrline acoust beads—**TL-83-226** (MTC 62)

SA-921

43

Shaft Wall Systems – 1-Hour Rating



Cavity Shaft Wall Cement Board/Gypsum Drywall— $\frac{1}{2}$ " DUROCK interior cement board— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—1" SHEETROCK brand gypsum liner panels set betw USG steel 20-ga. min C-H studs 24" o.c.— $\frac{1}{2}$ " THERMAFIBER SAFB—cement board screw att with $1\frac{1}{2}$ " DUROCK screws & laminated to gypsum panel with 4" strip DURABOND ceramic tile mastic applied with $\frac{1}{8}$ " notched trowel midway betw studs—joints fin—**UL Des U459**

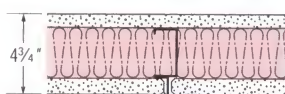
N/A

SA-700

SA-926

44

Shaft Wall Systems – 2-Hour Rating



wt. 8

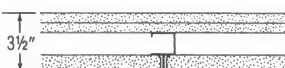
Cavity Shaft Wall—1" SHEETROCK brand gypsum liner panels, set betw 4" USG steel C-H studs 24" o.c. one side— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, ULTRACODE Core, other side—3" THERMAFIBER SAFB—panels vert appl & screw att 8" o.c. perim, 12" o.c. field—joints stag & fin—perimeter caulked—**UL Des U492**

52

SA-910913

SA-923-A

45



wt. 9

Cavity Shaft Wall Gypsum Drywall—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, one side—1" SHEETROCK brand gypsum liner panels set betw USG 25-ga. steel C-H studs 24" o.c.—panels appl vert to side opp liner panels & screw att—joints fin—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—fire-tested both sides—**UL Des U438**

39

47

USG-750302

Based on 1" SAFB in cavity—**BBN-750706**

SA-926

46



wt. 9

Cavity Shaft Wall Gypsum Drywall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—1" SHEETROCK brand gypsum liner panels set betw USG steel C-H studs 24" o.c.—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface—fire-tested both sides—**UL Des U467**—rating also applies with $\frac{1}{2}$ " SHEETROCK brand gypsum panels, water-resistant, FIRECODE C core—**U of C 6-23-75**

47

Based on 1" SAFB in cavity—**BBN-750704**

SA-926

SA-925

47



wt. 10

Cavity Area Separation Wall— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, water-resistant, FIRECODE C core—1" SHEETROCK brand gypsum liner panels set betw USG 25-ga. steel C-H studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels— $\frac{1}{2}$ " THERMAFIBER SAFB—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—perim caulked—est. fire rating based on U of C 6-23-75

50

Based on $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—**BBN-750411**

SA-925

48



wt. 10

Cavity Shaft Wall Gypsum Drywall—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, one side—1" SHEETROCK brand gypsum liner panels set betw USG 25-ga. steel C-H studs 24" o.c.—RC-1 chan spaced 24" o.c.— $\frac{1}{2}$ " THERMAFIBER SAFB—panels & RC-1 chan screw-att to side opp liner panels—base layer appl horiz—face layer appl vert—joints fin—est. fire rating based on U of C 2-8-72 and U of C 6-23-75—rating also applies with IMPERIAL FIRECODE C base and veneer finish

51

BBN-750412

SA-926

49



Vent Shaft Gypsum Drywall— $\frac{1}{2}$ " USG steel runners—24-ga. steel angles— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—1" SHEETROCK brand gypsum liner panel—**UL Des U505**

SA-926

50

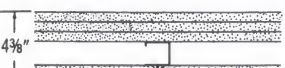


2" Laminated Solid—2 layers 1" SHEETROCK brand gypsum liner panels laminated—2"x1" 25-ga. channels back to back & welded 24" o.c.—2 layers, $\frac{1}{2}$ " SHEETROCK brand gypsum panels att with $\frac{1}{8}$ " Type S screws 12" o.c.—joints stag—**OSU T-4481**

N/A

51

Shaft Wall Systems – 3-Hour Rating




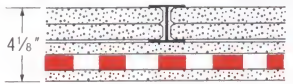
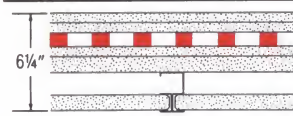
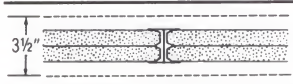
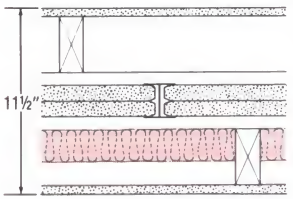
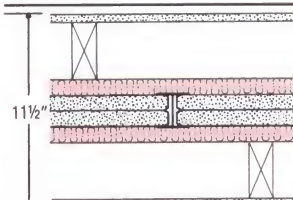
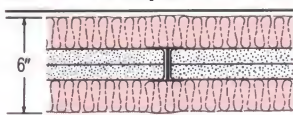

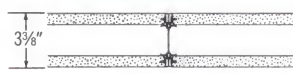

wt. 12

Cavity Shaft Wall Gypsum Drywall—3 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, one side—1" SHEETROCK brand gypsum liner panels set betw USG steel C-H studs 24" o.c.—panels screw att to side opp liner panels with joints stag—base & face layers appl vert—mid layer apply horiz—joints fin—est. fire rating based on U of C 2-16-72—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface

N/A

SA-926

52

Fire-rated construction	Acoustical performance	Folder reference			
Detail & physical data	Description & test no.	STC			
Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster (continued)					
Shaft Wall Systems – 3-Hour Rating					
 <p>4 5/8"</p> <p>wt. 13</p>	Steel Stud—3 layers 5/8" SHEETROCK brand gypsum panels, FIRECODE C core, ea side—1 1/2" studs 24" o.c.—base layers appl vert—face layer appl horiz—panels screw-att with joints stag & fin—perimeter caulked—rating based on assembly with or without sound atten fire blankets—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface— UL Des U435	59	Based on assembly with 1 1/2" SAFB in cavity— SA-830112	SA-920 SA-923 UN-30	53
 <p>4 1/8"</p>	Shaft Wall—2 layers 1" SHEETROCK brand gypsum liner panels laminated—2"x1" 25-ga. channels back to back & welded 24" o.c.—face & base layer of 5/8" SHEETROCK brand gypsum panels—furring channel 24" o.c.—layer joints stag— OSU-T-4423			N/A	54
Shaft Wall Systems – 4-Hour Rating					
 <p>6 1/4"</p> <p>wt. 16</p>	Cavity Shaft Wall Gypsum Drywall—2 layers 5/8" SHEETROCK brand gypsum panels, FIRECODE C core, face side—1" SHEETROCK brand gypsum liner panels set betw USG steel C-H studs 24" o.c.—1" liner panels & 5/8" gypsum panel core screw att to studs—horiz met fur chan 24" o.c.—face side panels screw att to fur chan—panels appl vert with joints stag—joints fin—est. fire rating based on U of C 5-24-74—rating also applies with IMPERIAL FIRECODE C base and veneer finish surface	N/A		SA-926	55
Solid Area Separation Wall Systems – 2-Hour Rating					
 <p>3 1/2"</p>	Solid Area Separation Wall—two 1" SHEETROCK brand gypsum liner panels betw USG one-piece steel H-studs 24" o.c.—min. 3/8" air space both sides separating liner panels from any adjacent construction— UL Des U336	N/A		SA-925	56
 <p>11 1/2"</p>	Basic design #56 plus 2x4 wd studs 16" o.c. each side on 2x4 plates min. 5/8" from liner panels—2" THERMAFIBER SAFB in one cavity—gypsum panels att with 1 1/2" Type W screws 12" o.c.—joints stag & fin.—perm caulked— UL Des U336	54 46 58 57 60 45 54 57	TL-88-348 Based on 2x4s and no SAFB— TL-88-353 Based on 2x4s and 2" SAFB on both sides— TL-88-347 Based on 2x4s and 3" SAFB one side— TL-88-351 Based on 2x4s and 3" SAFB on both sides— TL-88-350 Based on 2x3s, 5/8" gypsum panels, no SAFB— BBN-730104 Based on 2x3s, 5/8" gypsum panels, 2" SAFB one side— BBN-730103 Based on 2x3s, 5/8" gypsum panels, 2" SAFB both sides— BBN-730102	SA-925	57
 <p>11 1/2"</p>	Basic design #56 plus 2x4 wd studs 16" o.c. each side on 2x4 plates min. 5/8" from liner panels—1" THERMAFIBER SAFB stapled to both sides of liner panels—5/8" SHEETROCK brand gypsum panels, facing ea side— UL Des U336	53 50	TL-88-346 Based on 1" SAFB one side— TL-88-344	SA-925	58
Solid Area Separation Wall Systems – 3-Hour Rating					
 <p>6"</p> <p>wt. 9</p>	Solid Area Separation Wall—two 1" SHEETROCK brand gypsum liner panels set betw USG one-piece steel H-studs 24" o.c.—2" THERMAFIBER SAFB ea side—blks appl horiz with joints stag and staple-att to liner panels—separates any construction both sides— WHI-495-0393/0394	N/A		SA-925	59
Relocatable Walls – No Rating					
 <p>3 3/8"</p>	Rel ULTRAWALL Partn—concealed "T" studs both sides 24" o.c.—3/4" x 24" bevel edge ULTRAWALL gypsum panels—1 1/2" THERMAFIBER SAFB—joints stag & unfn—perimeter caulked—N/A	48	TL-70-251	SA-1020	60
 <p>3 3/8"</p>	Systems ULTRAWALL Partn—aluminum H-studs 24" o.c.—steel floor runner—ARL-300 ceiling runner—3/4" x 24" bevel edge ULTRAWALL gypsum panels—perimeter gaskets—joints finished with vinyl trim—N/A	42 46	USG-850509 Based on same construction with 1 1/2" THERMAFIBER SAFB— USG-850510	SA-1020	61
Relocatable Walls – 1-Hour Rating					
 <p>3 1/2"</p>	5/8" SHEETROCK brand gypsum panels, FIRECODE C core—alum battens 12" o.c.—2 1/2" 25-ga. steel studs 24" o.c.—2" THERMAFIBER insulation— UL Des U406			N/A	62

Fire-rated construction

Detail & physical data

Description & test no.

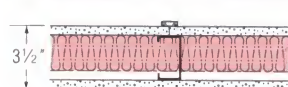
Acoustical performance

STC Description & test no.

Folder reference

Non-Combustible Wall Systems – Gypsum Drywall or Veneer Plaster (continued)

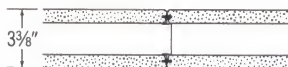
Relocatable Walls – 1-Hour Rating



$\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—alum battens 24" o.c.— $2\frac{1}{2}$ " 25-ga. steel studs 24" o.c.—2" THERMAFIBER insulation—**U of C 7-27-70**

N/A

63



Rel ULTRAWALL Partn—concealed "H" studs 24" or 30" o.c.— $\frac{3}{8}$ " x 24" or 30" bevel edge ULTRAWALL gypsum panels—joints unfin—perim gaskets—based on 24" panels—**U of C 8-18-67**—based on 30" panels—**U of C 7-23-69**

42

47

Based on 24" panels—**BBN-701008**
Based on 24" panels and 1" THERMAFIBER SAFB in cavity—**BBN-701216**

SA-1020

64

Rel ULTRAWALL Partn—concealed "H" studs 24" o.c.—stl flr run—painted stl clg run with int tabs— $\frac{3}{8}$ " x 24" bevel edge ULTRAWALL gypsum panels—joints unfin—**WHI-120/121**—based on alum clg run—**WHI-495-0225/0226**

N/A

SA-1020

65

Relocatable Walls – 2-Hour Rating



Rel ULTRAWALL Partn—concealed "H" studs 24" o.c.— $1\frac{1}{2}$ " THERMAFIBER SAFB— $\frac{3}{8}$ " x 24" bevel edge panels one side—double layer opp side with $\frac{3}{8}$ " Z-runners betw layers—joints unfin—perim caulked—painted—**UL Des U416**

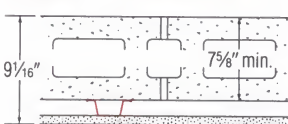
50

TL-70-198

SA-1020

66

Furred Masonry – 3-Hour Rating



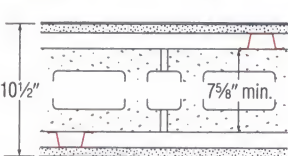
Concrete Blk (UL Classified)— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, or $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base & veneer finish— $\frac{7}{8}$ " deep met fur chan 24" o.c.—base att with 1" drywall screws 8" o.c. at butt joints, 12" o.c. in field— $\frac{1}{4}$ " veneer finish—joints taped—**UL Des U914**

N/A

SA-920

67

Furred Masonry – 4-Hour Rating



Concrete Blk (UL Classified)— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, or $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base & veneer finish— $\frac{7}{8}$ " deep met fur chan 24" o.c.—base att with 1" drywall screws 8" o.c. at butt joints, 12" o.c. in field— $\frac{1}{4}$ " veneer finish—joints taped—**UL Des U910**

N/A

SA-920

68

Non-Combustible Wall Systems – Conventional Lath & Plaster

Steel Stud Partitions – 1-Hour Rating



2" Solid Metal Lath & Plaster— $\frac{3}{8}$ " cr chan 16" o.c.—2.5 lb. metal lath wire-tied to chan—100:2-100:2 gypsum sand plaster—**MLA T-129 OSU**

37

NBS-523 F45

SA-920

69



$\frac{3}{8}$ " ROCKLATH Type X base, both sides, 8" o.c.— $2\frac{1}{2}$ " steel studs 16" o.c.—1" THERMAFIBER insulation— $\frac{1}{4}$ " plaster base coat, $\frac{1}{8}$ " plaster finish coat—**UL Des U488**

N/A

70

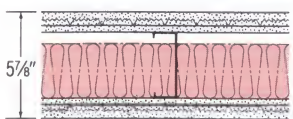
Steel Stud Partitions – 2-Hour Rating



$2\frac{1}{2}$ " Solid Metal Lath & Plaster— $\frac{3}{8}$ " cr chan 16" o.c.—3.4 lb. metal lath wire-tied to chan—1:2-1:3 gypsum perlite plaster—**GA WP 1930**

N/A

71



Steel Stud— $2\frac{1}{2}$ " studs 16" o.c.— $\frac{3}{8}$ " ROCKLATH base, both sides, 8" o.c.—3.4-lb. self-furring diamond mesh lath, both sides, 8" o.c.— $\frac{3}{8}$ " gypsum sand plaster, both sides—**UL U484**

N/A

SA-920

72

Security Walls – 2-Hour Rating

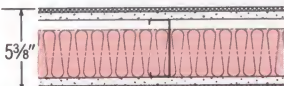
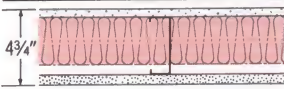
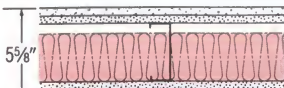
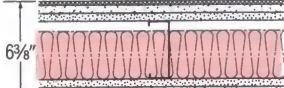
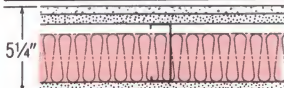

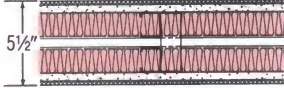
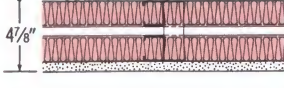
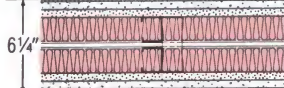



STRUCTOCORE 18-ga. steel panels att to 18-ga. steel perimeter channels— $\frac{3}{8}$ " min. coverage STRUCTO-BASE gypsum plaster sanded at 2:1 by weight in two coats—IMPERIAL finish plaster applied $\frac{3}{8}$ " thick—**UL Des U476**

N/A

SA-920

73

Fire-rated construction		Acoustical performance		Folder reference	
Detail & physical data		Description & test no.		STC Description & test no.	
Non-Combustible Wall Systems – Interior/Exterior Cement Board					
Steel Stud Partitions (Non-Load Bearing) – 1-Hour Rating					
	Steel Stud— $\frac{1}{2}$ " DUROCK interior cement board and $\frac{1}{2}$ " ceramic tile— $\frac{3}{8}$ " studs 16" o.c.—3" THERMAFIBER SAFB—board att with $\frac{1}{2}$ " DUROCK screws 8" o.c.—joint taped—alt. design $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, one side— UL Des U442	51 53	SA-840321 Based on alt. design— SA-840313	SA-932	74
wt. 14					
	Steel Stud— $\frac{1}{2}$ " DUROCK interior cement board— $\frac{3}{8}$ " studs 16" o.c.—3" min. THERMAFIBER SAFB—board att with $\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— UL Des U457	50 50	Based on $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core— USG-821206 Based on $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core— USG-821206	SA-932	75
wt. 7					
Steel Stud Partitions (Non-Load Bearing) – 2-Hour Rating					
	Steel Stud— $\frac{1}{2}$ " DUROCK interior cement board—base layer $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, one side, double-layer other side— $\frac{3}{8}$ " studs 16" o.c.—3" THERMAFIBER SAFB—board att with $1\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped— UL Des U474	N/A		SA-932	76
	Steel Stud—2 layer— $\frac{1}{2}$ " DUROCK interior cement board and $\frac{1}{2}$ " ceramic tile—base layer $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $\frac{3}{8}$ " studs 16" o.c.—3" THERMAFIBER SAFB—board att with $1\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped—alt. design 2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, one side— UL Des U443	51 59	SA-851028 Based on alt. design— SA-851016	SA-932	77
wt. 18					
Steel Stud Partitions (Load Bearing) – 1-Hour Rating					
	Steel Stud— $\frac{1}{2}$ " DUROCK interior cement board—base layer $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core— $\frac{3}{8}$ " studs 16" o.c.—3" THERMAFIBER SAFB—board att with $1\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped— UL Des U473	N/A		SA-932	78
	$\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—base layer $\frac{1}{2}$ " DUROCK interior cement board—board att with $1\frac{1}{2}$ " DUROCK screws 24" o.c.— $\frac{3}{8}$ " studs 16" o.c.—3" THERMAFIBER SAFB— UL Des U485	N/A		SA-932	79
Chase Walls – 1-Hour Rating					
	Plumbing Chase Wall— $\frac{1}{2}$ " DUROCK interior cement board and $\frac{1}{2}$ " ceramic tile— $1\frac{1}{2}$ " studs 16" o.c. in two rows with horiz braces— $1\frac{1}{2}$ " THERMAFIBER SAFB—board att with $\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped—alt. design $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, one side— UL Des U445	61 60	Based on 3" SAFB & $\frac{3}{8}$ " studs— SA-840524 Based on 3" SAFB & alt. design— SA-840515	SA-932	80
wt. 17					
	Plumbing Chase Wall— $\frac{1}{2}$ " DUROCK interior cement board— $1\frac{1}{2}$ " studs 16" o.c. in two rows with horiz braces— $1\frac{1}{2}$ " THERMAFIBER SAFB in both stud cavities—board att with $\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— UL Des U458	57	Based on 358ST25 studs, 3" SAFB and $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core— SA-840505	SA-932	81
wt. 7					
Chase Walls – 2-Hour Rating					
	Plumbing Chase Wall—2 layer— $\frac{1}{2}$ " DUROCK interior cement board and $\frac{1}{2}$ " ceramic tile—base layer $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $1\frac{1}{2}$ " studs 16" o.c. in two rows with horiz braces— $1\frac{1}{2}$ " THERMAFIBER SAFB—board att with $1\frac{1}{2}$ " DUROCK screws 8" o.c.—joints taped—alt. design 2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, one side— UL Des U444	65 62	SA-851112 Based on alt. design— SA-851102	SA-932	82
wt. 18					
Shaft Walls – 2-Hour Rating					
	Cavity Shaft Wall Cement Board/Gypsum Drywall— $\frac{1}{2}$ " DUROCK interior cement board— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—1" SHEETROCK brand gypsum liner panels set betw USG steel 20-ga. min C-H studs 24" o.c.— $1\frac{1}{2}$ " THERMAFIBER SAFB—cement board screw att with $1\frac{1}{2}$ " DUROCK screws & laminated to gypsum panel with 4" strip DURABOND ceramic tile mastic applied with $\frac{1}{2}$ " notched trowel midway betw studs—joints fin— UL Des U459	N/A		SA-700 SA-926	83

Fire-rated construction

Detail & physical data

Description & test no.

Acoustical performance

STC Description & test no.

Folder reference

Wood Framed Wall Systems – Gypsum Drywall or Veneer Plaster

Wood Stud Partitions (Load Bearing) – 45-Minute Rating



wt. 6

Wd Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— 2×4 16" o.c.—panels nailed 7" o.c.— $1\frac{1}{2}$ " cem ctd nails—joints exp or fin—**UL Des U317**

N/A

SA-924

84

Wood Stud Partitions (Load Bearing) – 1-Hour Rating



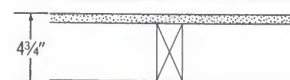
wt. 7

Wd Stud— $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base att direct & veneer finish only (not drywall)— 2×4 16" o.c.—base nailed 7" o.c. 6d nails— $\frac{1}{8}$ " veneer finish—joints taped—**U of C 10-27-64**

N/A

SA-920

85



wt. 7

Wd Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, or SHEETROCK brand gypsum panels, water-resistant, FIRECODE core— 2×4 16" or 24" o.c.—panels nailed 7" o.c.— $1\frac{1}{2}$ " cem ctd nails—joints exp or fin—perim caulked—**UL Des U305** based on 16" stud spacing—**UL Des U314** based on 24" stud spacing with joints fin

34

Based on 16" stud spacing and screws

SA-924

86

37

Based on 24" stud spacing—

USG-860807

Based on 24" stud spacing & 3"

SAFB—**BBN-700725**

46



wt. 8

Wd Stud— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— 2×4 16" o.c.—2 layer—base layer $\frac{1}{2}$ " SHEETROCK brand gypsum panels, appl vert with 4d ctd nails— $\frac{1}{2}$ " panel face layer strip lamin plus 6d nails 6" o.c. to top & bottom plates—joints stag & fin—perimeter caulked—**GA-WP-3341**

45

TL-69-52

SA-924

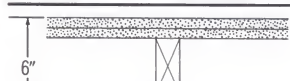
87

53

Based on $\frac{3}{8}$ " lamin. face layers & $1\frac{1}{2}$ " SAFB—**USG-221-ST-G-H****TL-58-60**

41

Wood Stud Partitions (Load Bearing) – 2-Hour Rating



wt. 12

Wd Stud—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, or SHEETROCK brand gypsum panels, water-resistant, FIRECODE core, ea side— 2×4 16" o.c.—base layer att with $1\frac{1}{2}$ " nails 6" o.c.—face layer att with $2\frac{1}{2}$ " nails 8" o.c.—joints exp or fin—**UL Des U301**

N/A

SA-924

88

Resilient Stud Partitions (Load Bearing) – 1-Hour Rating



wt. 7

Wd Stud—resil partition— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core— 2×4 16" o.c.—RC-1 chan both sides spaced horiz 24" o.c.—panels att with 1" Type S screws—joints fin—perimeter caulked—**T-1396-OSU**

41

Based on RC-1 chan one side only—

USG-860802

SA-924

89



wt. 7

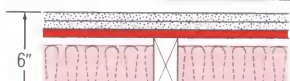
Wd Stud—resil partition $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core— 2×4 16" or 24" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c.—panels att with 1" Type S screws—opp side direct att with $1\frac{1}{2}$ " Type W screws—joints fin—perimeter caulked—**UL Des U311**

50

BBN-760903

SA-924

90



wt. 12

Wd Stud—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ea side— 2×4 16" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c.—resil side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—resil layers perim caulked—joints fin—**UL Des U334**

59

TL-67-239

SA-924

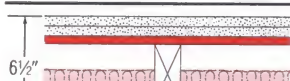
91

49

Based on same construction without

SAFB—**TL-67-212**

Resilient Stud Partitions (Load Bearing) – 2-Hour Rating



wt. 13

Wd Stud—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ea side— 2×4 16" o.c.—3" THERMAFIBER SAFB—RC-1 chan one side spaced 24" o.c.—resil side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—resil layers perim caulked—joints fin—**T-4799-OSU**

58

USG-810219

SA-924

92

52

Based on same assembly (non-fire rated)

without SAFB—**USG-810218**

Double Stud Chase Walls (Load Bearing) – 1-Hour Rating

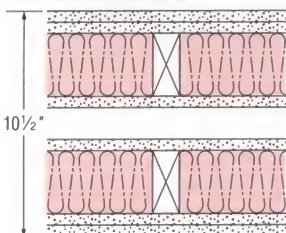

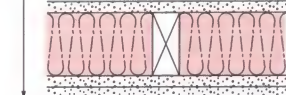
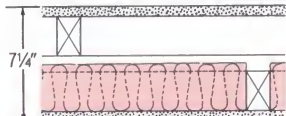

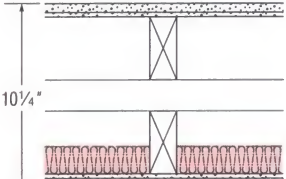
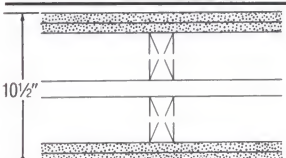


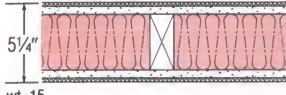
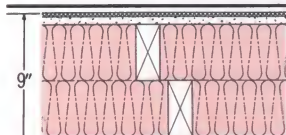


Wd Stud— $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base & veneer finish— 2×4 24" o.c.—(optional) $1\frac{1}{2}$ " THERMAFIBER SAFB—base nailed 7" o.c.— $\frac{1}{8}$ " veneer finish both sides—joints taped—**UL Des U340**

N/A

SA-920

93

Fire-rated construction	Acoustical performance		Folder reference	
Detail & physical data	Description & test no.	STC	Description & test no.	Folder reference
Wood Framed Wall Systems – Gypsum Drywall or Veneer Plaster (continued)				
Double Stud Chase Walls (Load Bearing) – 2-Hour Rating				
	Wd stud—2 layers 5/8" SHEETROCK brand gypsum panels, FIRECODE core, outside, both sides—5/8" SHEETROCK brand gypsum panels, FIRECODE core, inside, both sides—2x4 wd studs 24" o.c.— UL Des U342			N/A 94
	Alternate based on 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, both outside double layer & inside single layer— GA WP 3810	57	TL-73-224	N/A 95
	Alternate based on 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, outside double layers <i>only</i> — GA WP 3812	57	Based on TL-73-224	N/A 96
Double Stud Chase Walls (Non-Load Bearing) – 1-Hour Rating				
	Stag Wd Stud—5/8" SHEETROCK brand gypsum panels, FIRECODE core—2x3 non-load bearing studs 16" o.c.—2x3 plates 1" apart—panels nailed 7" o.c.—3" THERMAFIBER SAFB one side—joints fin—perim caulked—est. fire rating based on UL Des U305	54	Based on screws or nails 7" o.c.— TL-77-149	SA-924 97
	Stag Wd Stud—5/8" SHEETROCK brand gypsum panels, FIRECODE C core—2x4 16" o.c. on 2x6 com plate—panels att with 6d ctd nails 7" o.c.—2" THERMAFIBER SAFB one side—perim caulked—joints fin—est. fire rating based on UL Des U305	45	Based on FIRECODE core panels— TL-69-213	SA-924 98
	Wd Stud—base layer 1/2" SHEETROCK brand gypsum panels 12" o.c.—face layer 5/8" SHEETROCK brand gypsum panels, FIRECODE C core, laminated to base layer—2x4 wd studs 16" o.c.— GA WP 5510	55	Based on 1 1/2" THERMAFIBER SAFB in cavity— G & H BW-32ST	N/A 99
Double Stud Chase Walls (Non-Load Bearing) – 2-Hour Rating				
	Wd Stud—2 layers 5/8" SHEETROCK brand gypsum panels, FIRECODE core—2 rows 2x4 16" o.c. on sep plates 1" apart—base layer att with 6d ctd nails 24" o.c.—face layer att with 8d ctd nails 8" o.c.—stagger vert joints 16" o.c.—perim caulked—joints fin— GA-WP-3820	51 56 58	TL-69-214 Based on 3/8" thick insulation in one cavity— USG-710120 GA-NGC-3056	SA-924 100
	Stag Wd Stud—2 layers 5/8" SHEETROCK brand gypsum panels, FIRECODE C core—2x4 16" o.c. on 2x6 com plate—base layer att with 6d ctd nails 24" o.c.—face layer att with 8d ctd nails 8" o.c.—stagger vert joints 16" o.c.—perim caulked—joints fin— GA-WP-3910	47 51	TL-69-211 GA-NGC-2377	SA-924 101
Wood Framed Wall Systems – Conventional Lath & Plaster				
Wood Stud Partitions (Load Bearing) – 1-Hour Rating				
	Wd stud—5/8" ROCKLATH base, both sides, 4" o.c.—2x4 16" o.c.—1/2" 1:2 gypsum-sand plaster— GA WP 3430	41	TL-58-60	N/A 102
Wood Framed Wall Systems – Interior/Exterior Cement Board				
Wood Stud Wall (Load Bearing) – 1-Hour Rating				
	Wd Stud—1/2" DUROCK interior cement board and 1/2" ceramic tile—2x4 16" o.c.—3 1/2" THERMAFIBER SAFB—board att with 1 1/2" DUROCK screws or 1 1/2" galv nails 8" o.c.—joints taped—alt. design 5/8" SHEETROCK brand gypsum panels, FIRECODE core, one side— UL Des U329	37 40	USG-840404 Based on alt. design— USG-840314	SA-932 103
Double Stud Wall (Load Bearing) – 1-Hour Rating				
	Plumbing Chase Wall—1/2" DUROCK interior cement board and 1/2" ceramic tile—2 rows 2x4 16" o.c. on 2x8 com plate—3 1/2" THERMAFIBER SAFB both cavities—board att with 1 1/2" DUROCK screws or 1 1/2" galv nails 8" o.c.—joints taped—load bearing up to 50% allowable design load— WHI-495-0505 & 0508	50	SA-840523	SA-932 104

Fire-rated construction

Detail & Physical data

Description & test no.

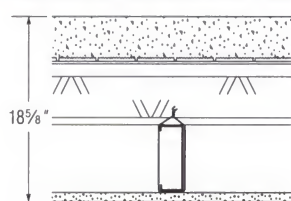
Acoustical performance

STC IIC Description & test no.

Folder
reference

Non-Combustible Ceiling Systems – Gypsum Drywall or Veneer Plaster

Steel Bar Joist Framing – 1-Hour Rating



clg. wt. 2

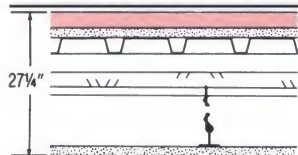
1/2" SHEETROCK brand gypsum panels, FIRECODE C core—panels screw att 12" o.c. rt. angl. to 3 1/2" steel studs 24" o.c.—studs wire tied to open web steel joists 24" o.c.—joints fin—2 1/2" concrete on riblath over joist—**GA FC 1105**

N/A

N/A

1

Steel Bar Joist Framing – 1 1/2-Hour Rating



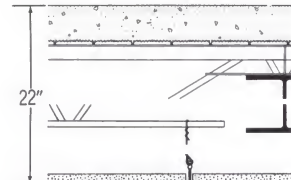
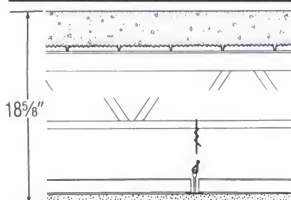
clg. wt. 4

1/2" SHEETROCK brand gypsum panels, FIRECODE C core—susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints stag and fin—min 1" roof insul and 1/2" gypsum bd on steel deck over bar joists—1-hr. rating based on assembly with 1/2" thick panels—**UL Des P510**

N/A

SA-904
SA-923
SA-920

2



clg. wt. 2

1/2" or 5/8" SHEETROCK brand gypsum panels, FIRECODE C core—gypsum panels screw-att below grid with 1" Type S screws 12" o.c.—joints stag & fin—2 1/2" conc on riblath over bar joist—**UL Des G528**

N/A

SA-904
SA-905

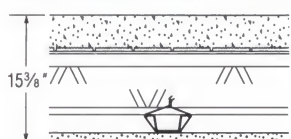
3

1/2" x 2' x 4' USG FIRECODE gypsum ceiling panels in Susp Exp Grid Sys—clg interrupted—2 1/2" conc on riblath over bar joist—**UL Des G259**

N/A

SA-904
SA-905

4



clg. wt. 2

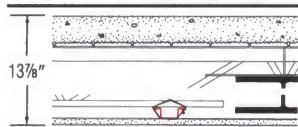
1/2" SHEETROCK brand gypsum panels, FIRECODE C core—panels screw att 12" o.c. rt. angl. to met fur chan 24" o.c.—chan wire tied to open web steel joists 24" o.c.—joints fin—2" concrete on riblath or steel deck over joist—**UL Des G502**

N/A

N/A

5

Steel Bar Joist Framing – 2-Hour Rating



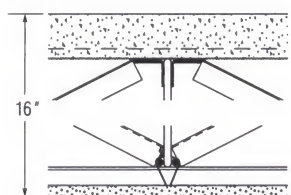
clg. wt. 3

1/2" SHEETROCK brand gypsum panels, FIRECODE C core—furred or susp—met fur chan 24" o.c.—panels att with interrupted clg. & 1 1/2" sound atten 1" Type S screws 12" o.c.—joints exp or fin—2 1/2" conc on riblath or corrug stl deck over bar joist—includes 2-hr. unrestrained beam—**UL Des G515**

N/A

SA-923
SA-920

6



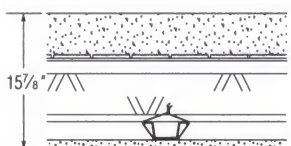
clg. wt. 2

1/2" SHEETROCK brand gypsum panels, FIRECODE core—panels screw att 8" o.c. rt. angl. to met fur chan 48" o.c.—chan wire to open web steel joists 12" o.c.—**UL Des G503**

N/A

N/A

7



clg. wt. 2

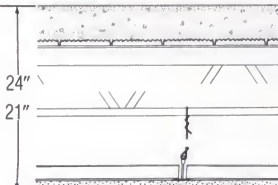
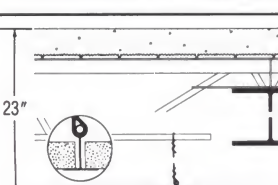
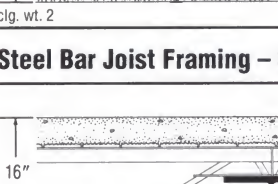
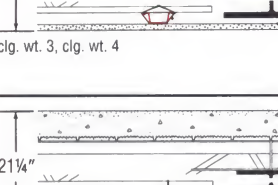
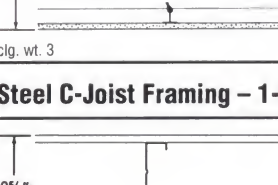
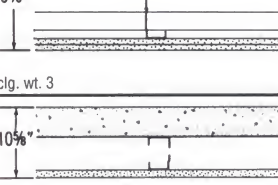
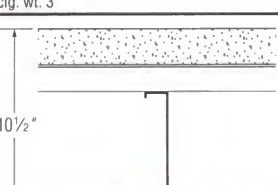
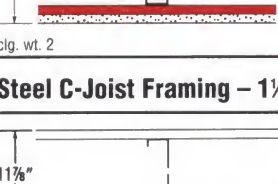
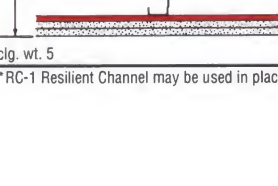

1/2" SHEETROCK brand gypsum panels, FIRECODE C core—panels screw att. 12" o.c. rt. angl. to met fur chan 24" o.c.—chan wire tied to open web steel joists 24" o.c.—joints fin—2 1/2" concrete on riblath or steel deck over joist—**GA FC 2030**

53

NGC-4075

N/A

8

Fire-rated construction		Acoustical performance		Folder reference	
Detail & Physical data	Description & test no.	STC	IIC		Description & test no.
Non-Combustible Ceiling Systems – Gypsum Drywall or Veneer Plaster (continued)					
Steel Bar Joist Framing – 2-Hour Rating					
	$\frac{1}{2}$ " or $\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—gypsum panels screw-att below grid with 1" Type S screws 12" o.c.—joints exp or fin— $2\frac{1}{2}$ " conc on riblath or steel deck over bar joist—includes 2-hr and 3-hr unrestrained beam— UL Des G523	N/A		SA-904 SA-905	9
	$\frac{1}{2}$ " or $\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—gypsum panels screw-att below grid with 1" Type S screws 8" o.c.—joints stag & fin— $2\frac{1}{2}$ " conc on riblath over bar joist—includes 1½-hr. unrestrained beam— UL Des G526	N/A		SA-904 SA-905	10
	$\frac{1}{2}$ " x 24" x 24" USG FIRECODE gypsum ceiling panels on Susp Exp Grid Syst—clg interrupted—light fix prot by $\frac{3}{4}$ " AURATONE FIRECODE panels or 1½" THERMAFIBER min wool bd— $2\frac{1}{2}$ " conc deck on riblath over bar joist—includes 2-hr. unrestrained beam— UL Des G222 —fire rating 1½ hr. with $\frac{1}{2}$ " x 24" x 48" panels; includes 1½-hr. unrestrained beam— UL Des G259	N/A		SA-904 SA-905	11
clg. wt. 2					
Steel Bar Joist Framing – 3-Hour Rating					
	$\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c.—joints exp or fin— $2\frac{1}{2}$ " conc on corrugated steel deck or riblath over bar joist—includes 3-hr. unrestrained beam— UL Des G512	N/A		SA-923	12
	$\frac{5}{8}$ " IMPERIAL FIRECODE C gypsum base & veneer finish ceiling—met fur chan—base att with 1" Type S screws 12" o.c.—joints exp or taped— $\frac{1}{4}$ " veneer finish— $2\frac{1}{2}$ " conc on corrugated steel deck or riblath over bar joist—furring channel spacing at 16" o.c. recommended— UL Des G512	N/A		SA-920	13
clg. wt. 3, clg. wt. 4					
	$\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—susp grid with main run 4' o.c. and cross tees 2' o.c.—gypsum panels screw-att below grid—joints fin— $3\frac{1}{2}$ " conc on riblath over bar joist—rating also applies with $\frac{5}{8}$ " panels and 2½" conc slab—includes 3-hr. unrestrained beam— UL Des G529	N/A		SA-923	14
clg. wt. 3					
Steel C-Joist Framing – 1-Hour Rating					
	$\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—725SJ18 steel joists 24" o.c.—dbl layer gypsum panel clg and $\frac{3}{4}$ " T&G plywd flr att to joists with Type S-12 screws—dbl layer gypsum panels around beam—joints exp—includes unrestrained beam— UL Des L524	39	Based on 95SJ16 joists— USG-760105	SA-923 UN-30	15
		43	Based on 95SJ16 joists and 3" SAFB*— USG-760310		
		56	Based on 95SJ16 joists and carpet pad— USG-760106		
		60	Based on 95SJ16 joists and carpet & pad with 3" SAFB*— USG-760405		
clg. wt. 3					
	$\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—75SJ18 steel joists 24" o.c.— $2\frac{1}{2}$ " conc flr on corrug steel deck—gypsum panel ceiling att to joists with 1" Type S-12 screws 12" o.c.—joints fin—est. fire rating based on witnessed laboratory test	45	Based on RC-1 resil chan 24" o.c.— KAL-443536	SA-904 SA-923 UN-30	16
clg. wt. 3					
	Resil ceiling— $\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core—panels screw att 12" o.c. rt. angl. to RC-1 chan 24" o.c.—RC-1 chan screw att to steel joists 24" o.c.—joints fin—2" concrete on steel deck over joist— GA FC 1145	N/A		N/A	17
clg. wt. 2					
Steel C-Joist Framing – 1½-Hour Rating					
	Resil ceiling— $\frac{5}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $\frac{3}{4}$ " T & G plywd flr att to joists with Type S-12 screws 24" o.c.—95SJ16 steel joists 24" o.c.—dbl layer gypsum panel clg att to RC-1 chan screw att to joist 16" o.c.—base panels att with 1" Type S screws 24" o.c.—face panels att with 1½" Type G screws 8" o.c. at butt joints, 1½" Type S screws 12" o.c. in field—joints fin— UL Des L527	48 51	USG-771101 Based on carpet & pad— SA-781110	SA-923 UN-30	18
clg. wt. 5					

*RC-1 Resilient Channel may be used in place of metal furring channel.

Fire-rated construction

Detail & Physical data

Description & test no.

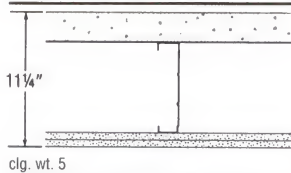
Acoustical performance

STC IIC Description & test no.

Folder reference

Non-Combustible Ceiling Systems – Gypsum Drywall or Veneer Plaster (continued)

Steel C-Joist Framing – 2-Hour Rating



5/8" SHEETROCK brand gypsum panels, FIRECODE C core—75SJ18 steel joists 24" o.c.—2 1/2" conc flr over corrug steel deck—dbl layer gypsum panel ceiling—base panels att with 1" Type S-12 screws 12" o.c.—face panels att with 1 1/4" Type S-12 screws 12" o.c.—joints stag and fin—est. fire rating based on witnessed laboratory test.

44

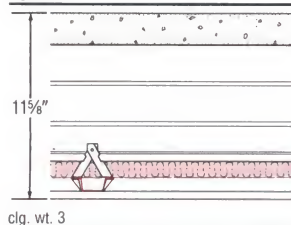
73

KAL-443533

Based on carpet & pad—
KAL-443680
Based on RC-1 resil chan.
24" o.c.—KAL-443534

SA-923
UN-30

19



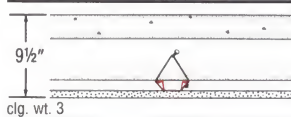
5/8" SHEETROCK brand gypsum panels, FIRECODE C core—725SJ18 steel joists 24" o.c.—2" conc flr on corrug steel deck—met fur chan 24" o.c. clip-att to joist—1" THERMAFIBER insul laid over chan below joist—panels screw-att to chan 12" o.c.—joints fin—UL Des G533

N/A

SA-923
UN-30

20

Precast Concrete – 2-Hour Rating

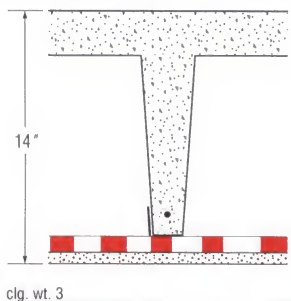


5/8" SHEETROCK brand gypsum panels, FIRECODE C core—met fur chan 24" o.c.—panels att with 1" Type S screws—joints fin—2" prestressed reg or lightwt conc units with 6" deep stems 48" o.c.—UL Des J502—UL Des J503

N/A

SA-904
SA-923

21



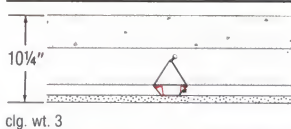
5/8" SHEETROCK brand gypsum panels, FIRECODE core—panels screw att 8" o.c. rt. angl. to met fur chan 24" o.c.—joints fin—chan screw att to hanger straps on 2 1/2" precast conc joists 35" o.c.—joist leg 10" deep—GA FC 2120

N/A

N/A

22

Precast Concrete – 3-Hour Rating



5/8" SHEETROCK brand gypsum panels, FIRECODE C core—met fur chan 24" o.c.—panels att with 1" Type S screws—joints fin—prestressed 2 1/2" reg or 2 1/2" lightwt conc units with 6" deep stems 48" o.c.—UL Des J502—UL Des J503—UL Des J504

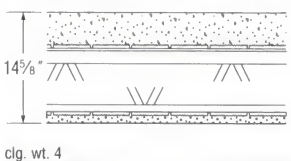
N/A

SA-920

23

Non-Combustible Ceiling Systems – Conventional Lath & Plaster

Steel Bar Joist Framing – 1-Hour Rating



5/8" RED TOP gypsum plaster, sanded 1:2:2:3—applied over 3/4" riblath wire tied 5" o.c. to open web steel joists 24" o.c.—2" concrete on riblath over joist—GA FC 1180

N/A

N/A

24

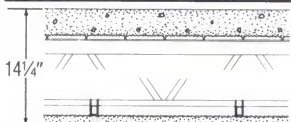
Alternate based on 5/8" RED TOP gypsum plaster-vermiculite or 5/8" RED TOP wood fiber plaster—GA FC 2160

N/A

N/A

25

Steel Bar Joist Framing – 2-Hour Rating



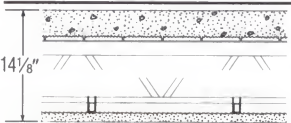
3/4" cold rolled channel furred or suspended—3.4# diamond mesh lath & 3/4" 100:2-100:3 gypsum-sand plaster—2 1/2" concrete on riblath or 28-ga. corrugated steel deck over bar joist—BMS-92, R4024-12

N/A

SA-920

26

Steel Bar Joist Framing – 2 1/2-Hour Rating

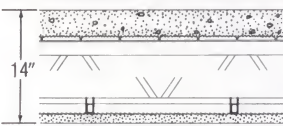
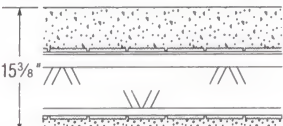
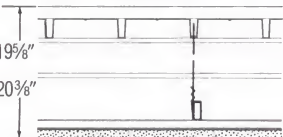
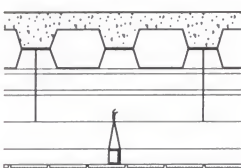
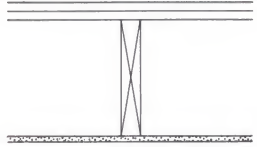
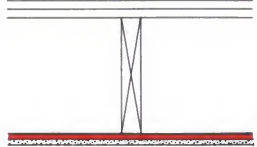
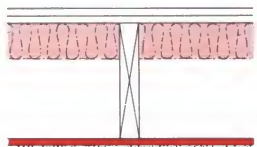


3/4" cold rolled channel furred or suspended—3.4# diamond mesh lath & 3/4" 100:1-100:1 gypsum wood fiber-sand plaster—2 1/2" concrete on riblath or 28-ga. corrugated steel deck over bar joist—UL Des R5429-1, R4024-12

N/A

SA-920

27

Fire-rated construction		Acoustical performance		Folder reference
Detail & Physical data	Description & test no.	STC	IIC	
Non-Combustible Ceiling Systems – Conventional Lath & Plaster (continued)				
Steel Bar Joist Framing – 3-Hour Rating				
	3/4" cold rolled channel furred or suspended—3.4# diamond mesh lath & 1/2" neat wood fiber gypsum plaster—2 1/2" concrete on riblath or 28-ga. corrugated steel deck over bar joist— BMS-92, R4024-12	N/A		SA-920 28
	Alternate based on 3/8" 1:2-1:3 RED TOP gypsum plaster-vermiculite or 1/2" RED TOP wood fiber plaster neat— GA FC 3140	N/A		N/A
clg. wt. 4				
Steel Bar Joist Framing – 4-Hour Rating				
	1/2" 1:2-1:3 RED TOP gypsum plaster-vermiculite—applied over 3/8" riblath wire tied 5" o.c. to open web steel joists 24" o.c.—2 1/2" concrete on riblath over joist— BMS 92/43	N/A		N/A 30
clg. wt. 5				
Rib-Type Steel Roof Deck – 1 1/2-Hour Rating				
	Suspended 3.4# diamond mesh metal lath & 3/4" 100:2-100:3 gypsum-sand plaster—rib type steel roof deck with 1" wood-fiber insulation— NBS-57	N/A		SA-920 31
	Suspended 3.4# diamond mesh metal lath & 1" 100:2 gypsum-sand plaster—rib type steel roof deck with 1 1/2" wood-fiber insulation— NBS-57	N/A		SA-920
Concrete Cellular Steel Deck – 3-Hour Rating				
	3/4" STRUCTO-LITE plaster—appl over 3.4# diamond lath wire tied 5" o.c. to 3/4" cold rolled chan 12" o.c. wire tied to 1 1/2" cold rolled chan 48" o.c.—chan assembly suspended 16" from 2" conc. slab over cellular steel deck— GA FC 3150	N/A		N/A 33
clg. wt. 2.5				
Wood Framed Ceiling Systems – Gypsum Drywall or Veneer Plaster				
Floor/Ceiling – 1-Hour Rating				
	1/2" SHEETROCK brand gypsum panels, FIRECODE core, ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—panels att with 6d nails 6" o.c.—joints fin— UL Des L501	38 39	32 56	CK-6412-7 Based on 44-oz carpet & 40-oz pad atop flooring— CK-6412-8
	1/2" SHEETROCK brand gypsum panels, FIRECODE C core, ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—panels att with 5d cem ctd nails 6" o.c.—joints fin— UL Des L512	N/A		SA-924
clg. wt. 3				
	Resil ceiling—1/2" SHEETROCK brand gypsum panels, FIRECODE C core—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin— UL Des L514	N/A		SA-924 36
	Resil ceiling—SHEETROCK brand gypsum panels, FIRECODE core—1 1/2" nom wd sub & fin flr—44-oz carpet & 40-oz pad atop flr—2x10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	47 48	67 66	Based on 1/2" SHEETROCK brand gypsum panels, FIRECODE C core— CK-6512-7 Based on 3/8" SHEETROCK brand gypsum panels, FIRECODE core— CK-6412-9
clg. wt. 3				
	Resil ceiling—SHEETROCK brand gypsum panels, FIRECODE core—1 1/2" nom wd sub & fin flr—2x10 wd joist 16" o.c.—3" THERMAFIBER SAFB betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	51 50	46 46	Based on 1/2" SHEETROCK brand gypsum panels, FIRECODE C core— CK-6512-9 Based on 3/8" SHEETROCK brand gypsum panels, FIRECODE core— CK-6412-3
	Resil ceiling—SHEETROCK brand gypsum panels, FIRECODE core—1 1/2" nom wd sub & fin flr—44-oz carpet & 40-oz pad atop flr—2x10 wd joist 16" o.c.—3" THERMAFIBER SAFB betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est. fire rating based on UL Des L514	52 51	71 70	Based on 1/2" SHEETROCK brand gypsum panels, FIRECODE C core— CK-6512-8 Based on 3/8" SHEETROCK brand gypsum panels, FIRECODE core— CK-6412-4
clg. wt. 3				

Fire-rated construction

Detail & Physical data

Description & test no.

Acoustical performance

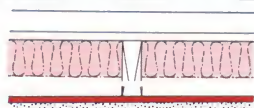
STC IIC

Description & test no.

Folder reference

Wood Framed Ceiling Systems – Gypsum Drywall or Veneer Plaster (continued)

Floor/Ceiling – 1-Hour Rating



Resil ceiling— $\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core— $1\frac{1}{2}$ " perlite-sand conc over $\frac{1}{2}$ " plywd subflr— 2×10 wd joists 16" o.c.—3" glass fiber batts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—**UL Des L516**

59

Based on $\frac{3}{4}$ " gypsum concrete & $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core—**USG 740704**

SA-924

40

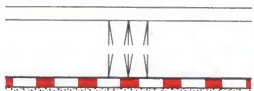
47

Based on vinyl tile atop flooring—**USG 740703**

65

Based on 44-oz. carpet & 40-oz. pad atop flooring—**USG 740705**

clg. wt. 3



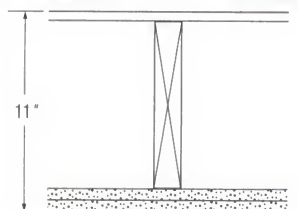
$\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE core, ceiling—double 2x10 or single 4x10 wd joist 48" o.c.—met fur chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—**UL Des L508**

N/A

SA-924

41

clg. wt. 3



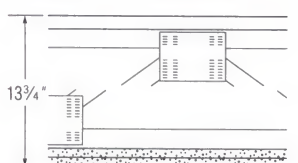
Base layer: $\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE core—screw att at rt. angl. to 2x10 wd joists 24" o.c.—Face layer: $\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE core screw att 12" o.c. at rt angl. to joists—joints of second layer offset 24" and fin.—Floor: $\frac{1}{2}$ " plywd w/ ext glue appl rt. angl to joists w/8d nails. Also for roof-ceilings, incl. trusses—**GA FC 5406**

N/A

N/A

42

clg. wt. 5

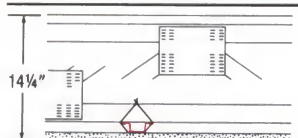


Base layer: $\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core—screw att at rt. angl. trusses 24" o.c.—Face layer: $\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core screw att 12" o.c. at rt angl. to joists—joints of second layer offset 24" and fin.—Floor: $\frac{3}{4}$ " plywd w/ ext glue appl rt. angl to joists w/ 6d ring nails—**UL Des L542**

N/A

N/A

43



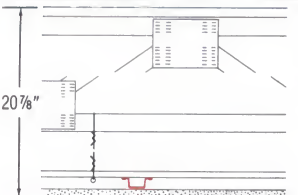
$\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ceiling—2x12 wd truss of 2x4 lbr secured with steel truss plates—trusses 24" o.c.— $\frac{3}{4}$ " nom plywd flr—met fur chan 24" o.c. wire-tied to trusses—panels att with 1" Type S screws 12" o.c.—joints fin—**UL Des L528***

N/A

SA-920
SA-924

44

clg. wt. 3



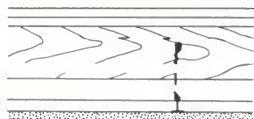
$\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ceiling—2x12 wd truss of 2x4 lbr secured with steel truss plates—trusses 24" o.c.— $\frac{3}{4}$ " nom plywd flr—susp grid with main run 4" o.c. and cross tees 2" o.c.—panels att with 1" Type S-12 screws 12" o.c.—joints fin—**UL Des L529**

N/A

SA-904
SA-920
SA-924

45

clg. wt. 3



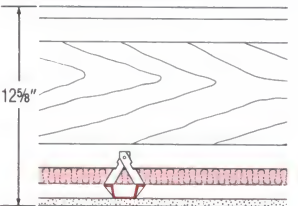
$\frac{1}{2}$ " or $\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—susp grid with main run 4" o.c. and cross tees 2" o.c.—panels screw-att below grid—joints fin—**UL Des L525**

N/A

SA-924

46

clg. wt. 3



$\frac{3}{4}$ " SHEETROCK brand gypsum panels, FIRECODE C core, ceiling— $\frac{3}{4}$ " T&G plywd flr—10" I-shaped wd joist 24" o.c.—met fur chan 24" o.c. clip-att to joist—1" THERMAFIBER insul laid over chan below joists—panels screw att to chan 12" o.c.—joints fin—**UL Des L530** based on Truss Joist members—**UL Des L531**

47

40

TL-81-87—IN-81-16

SA-924

47

54

Based on carpet & pad atop flooring—**IN-81-17**

43

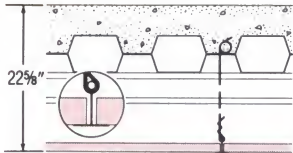
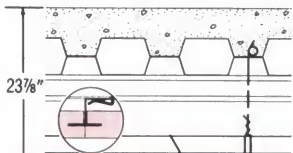
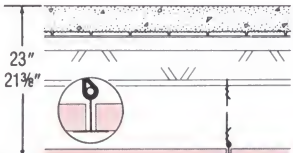
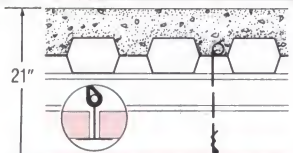
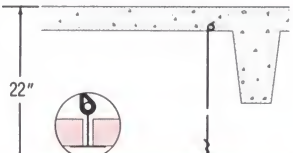
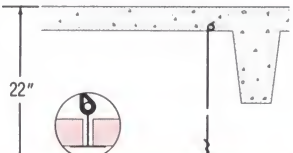
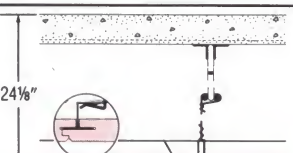
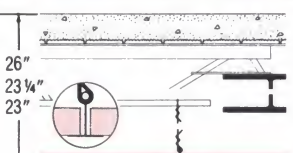
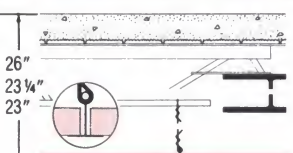
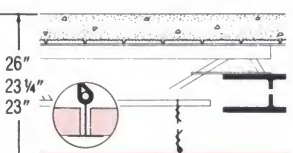
Based on cushioned vinyl atop flooring—**IN-81-19**

clg. wt. 3

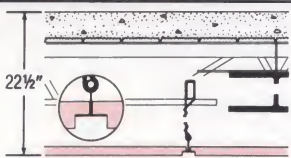
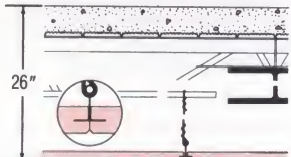
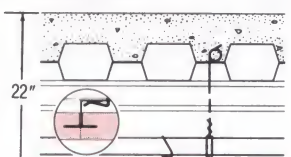
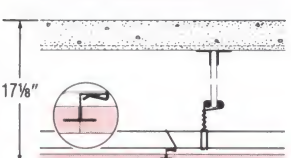
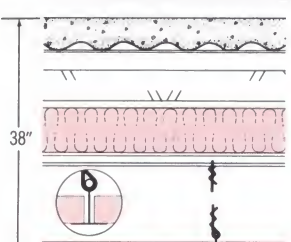
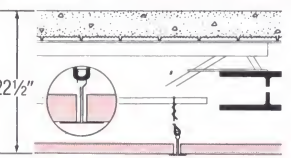
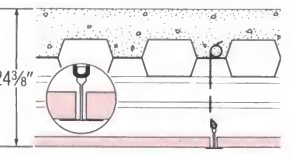
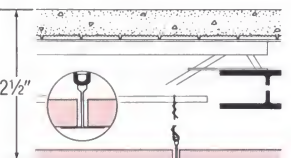
*RC-1 Resilient Channel may be used in place of metal furring channel.

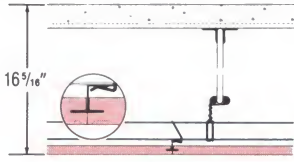
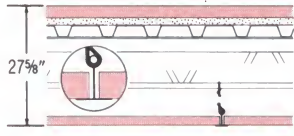
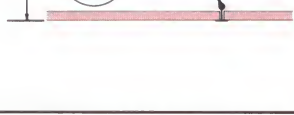
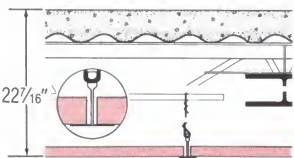
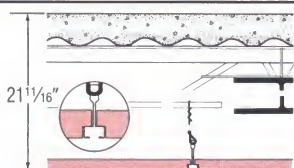
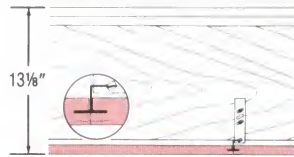
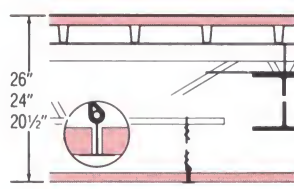
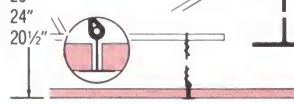

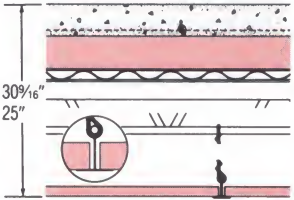
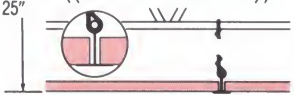
	<p>$\frac{1}{2}$" 1:2 RED TOP gypsum plaster-perlite over $\frac{3}{8}$" type X ROCKLATH plaster base at rt. angl. to 2x10 wd joists 16" o.c.—1" nom. T&G sub and finish floor—GA FC 5470</p>	N/A	N/A	54
	<p>$\frac{1}{2}$" 1:2 sanded RED TOP gypsum plaster over $\frac{3}{8}$" type X ROCKLATH plaster base at rt. angl. to 2"x10" joists 16" o.c.—1" nom. T&G sub and finish floor—GA FC 5490</p>	N/A	N/A	55
	<p>$\frac{1}{2}$" 1:2-1:3 sanded RED TOP gypsum plaster over 3.4# diamond lath nailed 6" o.c. at rt. angl. to 2x10 wd joists 16" o.c.—1" nom. T&G sub and finish floor—GA FC 5510</p>	N/A	N/A	56

clg. wt. 4

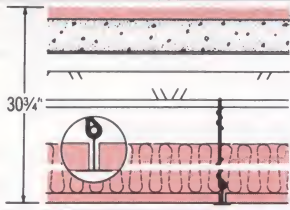
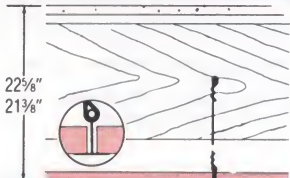
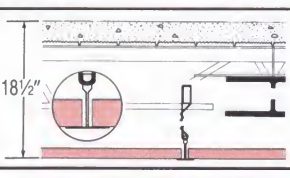
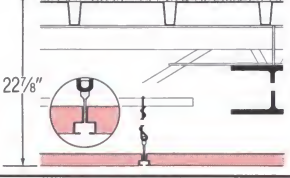
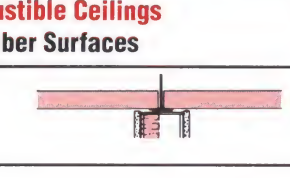
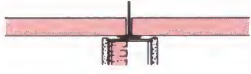


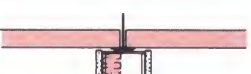

Clg. STC range†	Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
Acoustical and Air Distributing Ceilings				
3-Hour Rated Ceilings				
Mineral Fiber Surfaces				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 1 1/2" THERMAFIBER min wool bd—2 1/2" conc on cellular stl flr— UL Des A207	Includes 4-hr. unrestrained beam SA-904 SA-905	57
clg. wt. 12				
45 to 49 c		AURATONE FIRECODE 3/8" x 12" x 12" acoust clg tile on Concealed Z-runner Syst—clg interrupted—light fix prot by 1 1/2" THERMAFIBER min wool bd—2 1/2" conc on cellular stl flr— UL Des A009	Includes 4-hr. unrestrained beam SA-905	58
clg. wt. 12				
2-Hour Rated Ceilings				
Mineral Fiber Surfaces				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/4" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G211—UL Des G227	UL Des G227 is Shadowline System and includes 3-hr. unrestrained beam SA-904 SA-905	59
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 48" or 24" x 24" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/4" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on cellular steel floor— UL Des D201	Includes 3-hr. unrestrained beam SA-905	60
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/4" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2" prestressed conc units with 6" deep stems 48" o.c.— UL Des J202	SA-905	61
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 48" or 24" x 24" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/4" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck with 6" deep pan beam— UL Des J201	Rating 1 1/2 hr. for insulated roof/ceiling SA-905	62
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 12" x 12" acoust clg tile on Concealed Z-runner Syst—clg interrupted—light fix prot by 1 1/2" min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G019	SA-905	63
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 24" to 30" x 60" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/4" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G231	Panels 3/8" thick also qualify, except in 30" x 60" size. Includes 3-hr. unrestrained beam. SA-904 SA-905	64
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8"x24"x48" or 36" or 24", 24" or 36"x60", 20" or 30"x60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/4" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G204	Includes 2-hr. unrestrained beam SA-904 SA-905	65
clg. wt. 12				
35 to 39	40 to 44 	AURATONE FIRECODE 3/8" x 24" x 48" or 24" x 24" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G215	Includes 2-hr. unrestrained beam SA-905	66
clg. wt. 12				

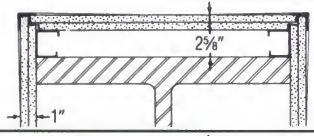
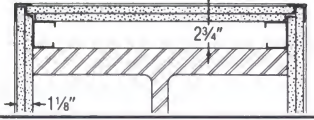

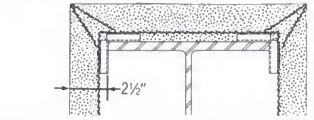
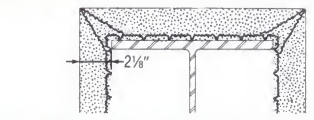
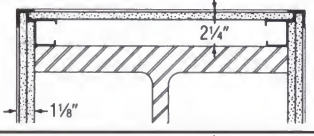
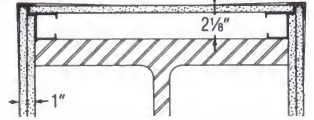
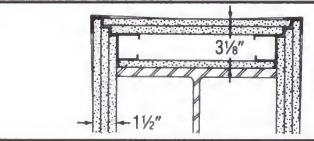
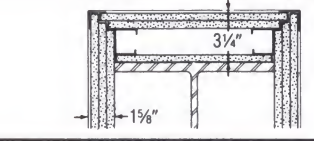

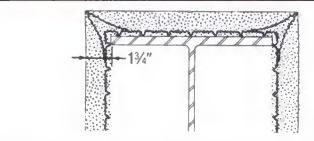
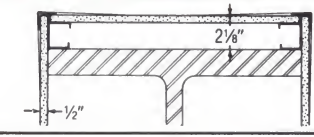
†Per AMA 1-II test procedure for horizontally adjacent spaces.
See Ceiling Systems folder, SA-905, for STC values of various patterns.

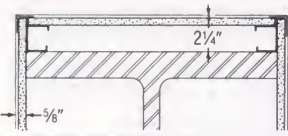
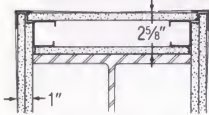
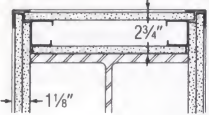
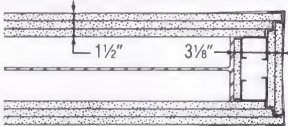
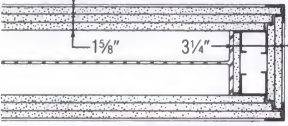
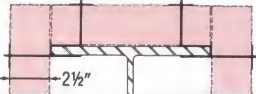
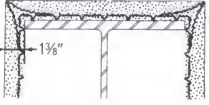
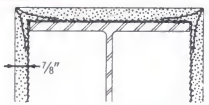
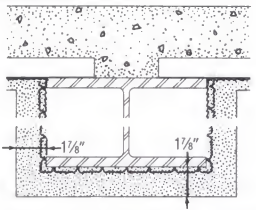
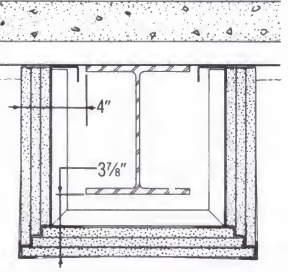
Clg. STC range†	Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
2-Hour Rated Ceilings Mineral Fiber Surfaces				
35 to 39		ACOUSTONE FIRECODE 3/4" x 24" x 24" min acoust panels on Exp Shadowline Grid Syst—clg interrupted—light fix prot by 3/8" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G228	Includes 2-hr. unrestrained beam	SA-905 67
35 to 39		AURATONE FIRECODE 3/4" x 12" x 12" or 24" x 24" acoust clg tile on Concealed Accessible Grid Syst—clg interrupted—light fix prot by 1 1/2" THERMAFIBER min wool bd—2 1/2" conc deck on riblath over bar joist— UL Des G008	Includes 2-hr. unrestrained beam	SA-905 68
35 to 39	40 to 44		Includes 1 1/2 hr. unrestrained beam. Unrestrained assembly rating—1 1/2 hr.	SA-905 69
35 to 39	40 to 44		ACOUSTONE FIRECODE 3/4" x 12" x 12" min acoust tile on Concealed Z-runner Syst—2 1/2" conc deck on riblath over bar joist— UL Des G018	SA-905 70
35 to 39	40 to 44		AURATONE FIRECODE 3/4" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 1 1/2" THERMAFIBER min wool bd—insul clg membrane below joists—2" vermiculite conc on corrug stl deck over bar joist— UL Des P241	SA-905 71
35 to 39	40 to 44		Includes 3-hr. unrestrained beam	SA-904 SA-905 72
35 to 39	40 to 44		Includes 4-hr. unrestrained beam	SA-904 SA-905 73
35 to 39	40 to 44		AURATONE FIRECODE 3/4" x 2" x 2" or 3/4" x 2" x 4" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/8" or 1/2" AURATONE FIRECODE panels—2 1/2" conc on riblath over bar joist— UL Des G265	SA-904 SA-905 74

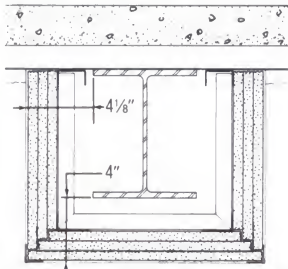
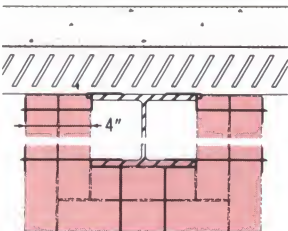
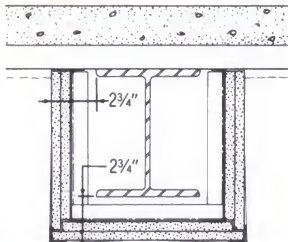
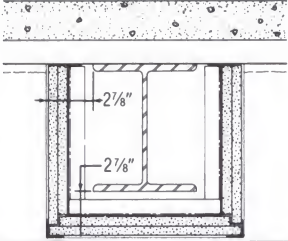
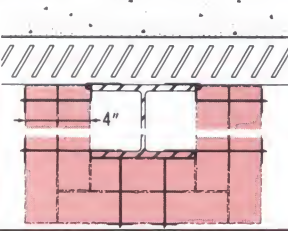
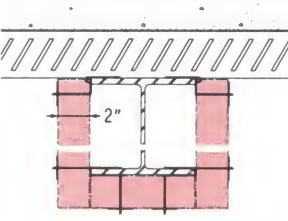
Clg. STC range†		Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
1½-Hour Rated Ceilings Mineral Fiber Surfaces					
35 to 39			ACOUSTONE FIRECODE ¾" x 12" x 12" min acoust tile on Concealed Z-runner Syst—2" conc deck on riblath over bar joist— UL Des G020		SA-905 75
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" acoust clg panels in direct-hung Susp Exp Grid Syst—clg interrupted—light fix prot by ¾" AURATONE FIRECODE panels—1" stl roof deck & ¾" SHEETROCK brand gypsum panels, FIRECODE core & 1" min. fiber insul over bar joist— UL Des P233	No max. on insul. thickness. Unrestrained assembly rating—1 hr.	SA-904 76 SA-905
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" or 24" x 24" acoust clg panels in direct-hung Susp Exp Grid Syst—clg interrupted—light fix prot by ¾" AURATONE FIRECODE panels or 1½" THERMAFIBER min wool bd—1½" stl roof deck & ¾" SHEETROCK brand gypsum panels, FIRECODE core & 2" min fiber insul over bar joist— UL Des P230	No max. on insul. thickness. Unrestrained assembly and beam rating—1 hr	SA-904 77 SA-905
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 2' x 2' acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by ¾" AURATONE FIRECODE panels—2½" conc on corrug steel deck over bar joist— UL Des G262		SA-904 78 SA-905
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 2' x 2' acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by ¾" AURATONE FIRECODE panels—2½" conc on corrug steel deck over bar joist— UL Des G264		SA-904 79 SA-905
1-Hour Rated Ceilings Mineral Fiber Surfaces					
35 to 39			ACOUSTONE FIRECODE ¾" x 12" x 12" min acoust tile on Concealed Z-runner Syst—1" nom wd sub & fin floor over wd joist 16" o.c.— UL Des L003		SA-905 80
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 1½" THERMAFIBER min wool bd—1½" stl roof deck & 1" noncomb insul over bar joist— UL Des P214	Includes 1-hr. unrestrained beam	SA-905 81
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 1½" THERMAFIBER min wool bd—1½" stl roof deck & ½" SHEETROCK brand gypsum panels & 1" rigid foam plastic insul over bar joist— UL Des P235	Includes 1-hr. unrestrained beam. Max. 8" insul. thickness	SA-905 82
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" or 24"x24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—6" insul batts over clg—light fix prot by ¾" AURATONE FIRECODE panels—1" fluted stl roof deck & 1" to 3" noncomb insul over bar joist— UL Des P238	Includes 1-hr. unrestrained beam	SA-905 83
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" or 24" x 24" or 20" x 60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 1½" THERMAFIBER min wool bd—2" vermiculite conc & 2" foamed plastic insul & corrug stl roof deck over bar joists— UL Des P246	Includes 1-hr. unrestrained beam	SA-905 84
35 to 39	40 to 44		AURATONE FIRECODE ¾" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by ¾" AURATONE FIRECODE panels—2" vermiculite conc. & 2" foamed plastic insul & corrug stl roof deck over bar joists— UL Des P255	Includes 1-hr. unrestrained beam	SA-904 85 SA-905

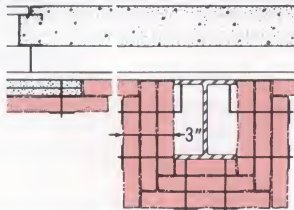
†Per AMA 1-II test procedure for horizontally adjacent spaces.
See Ceiling Systems folder, SA-905, for STC values of various patterns.

Clg. STC range†	Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
1-Hour Rated Ceilings				
Mineral Fiber Surfaces (continued)				
35 to 39	40 to 44 	AURATONE FIRECODE 3/4" x 24" x 48" or 24" x 24" in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/8" AURATONE FIRECODE panels—6" insul batts over clg—3/4" noncomb insul and 2" metal-edge conc plank over bar joists— UL Des P245		SA-905 86
35 to 39	40 to 44 clg. wt. 1.2 	AURATONE FIRECODE 3/4" x 24" x 48" or 24" x 24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/8" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—1" non wd sub & fin flr over 2x10 wd joist— UL Des L206		SA-904 87 SA-905
35 to 39	40 to 44 clg. wt. 1.2 	AURATONE FIRECODE 3/4" x 24" x 48" or 24" x 60" or 3/4" x 24" x 24" in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/8" AURATONE FIRECODE panels or 1 1/2" THERMAFIBER min wool bd—1" nom wd sub & fin flr over 2x10 wd joists— UL Des L202		SA-905 88
35 to 39	40 to 44 	AURATONE FIRECODE 3/4" x 2' x 4' acoust clg panels in Susp Exp Grid Syst—clg interrupted—2" conc on riblath over bar joist— UL Des G201		SA-904 89 SA-905
35 to 39	40 to 44 	AURATONE FIRECODE 3/4" x 2' x 2' acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fix prot by 3/8" AURATONE FIRECODE panels—1 1/2" steel roof deck & rigid foam plastic insul over bar joist— UL Des P254	Includes 3/4-hr. unrestrained beam	SA-904 90 SA-905
Noncombustible Ceilings				
Mineral Fiber Surfaces				
35 to 39	clg. wt. 1.3 	ACOUSTONE "F" Foil-Backed 3/4" x 12" x 24" or 12" x 36" min acoust tile on 1-Way Exp Grid Syst— ASTM E84	One-way exposed grid system for accessibility	SA-905 91
40 to 44		ACOUSTONE Foil-Backed Fissured or Glacier 3/4" x 12" x 12" min acoust tile on concealed 100% Accessible Direct-hung Susp Syst— ASTM E84	Basic direct-hung concealed accessible system	SA-905 92
35 to 39	clg. wt. 1.3 	ACOUSTONE "F" 3/4" x 12" x 12" or 12" x 24" min. acoust tile on Concealed Z-runner Syst— ASTM E84	Basic concealed spline acoustical tile system; STC estimated	SA-905 93
40 to 44	clg. wt. 1.0 	3/4" or 3/4" x 24" x 24" or 24" x 48" acoust clg panels in Susp Exposed Grid Syst— ASTM E84	Basic noncombustible lay-in panels; NRC varies with pattern	SA-905 94
48	clg. wt. 1.5 	AURATONE 3/4" x 24" x 48" acoust clg panels in Susp Exp Grid Syst—contin over partn—3" THERMAFIBER SAFB over clg— ASTM E84	Sound test USG-820406 includes blankets extending 4 ft. each side of partition	SA-905 95

Column type	Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
Column Fireproofing				
4-Hour Rated Applications				
W14 x228		Gypsum Drywall Fireprfg—2 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, around col—panels screw att to 158ST25 steel studs at corners—met corner beads—joints fin— UL Des X507		SA-923 1
W14 x228		Gypsum Base & Veneer Finish Fireprfg—2 layers 1/2" IMPERIAL FIRECODE C gypsum base around col—base screw att to 158ST25 steel studs at corners—met corner beads—1/8" veneer finish— UL Des X507		SA-920 2
W14 x228		THERMAFIBER Mineral Fireprfg—2" fireprfg around col att with 1/4" stl wire studs welded to col 24" o.c.— UL Des X304	Dry assembly offers excellent thermal insulation for exterior columns	SA-707 3
W10 x49		Metal lath & plaster—3.4# diamond mesh metal furred 1/2" from face of column—1 1/2" STRUCTO-LITE plaster with fill between flange face & lath— UL Des X405		SA-920 4
W10 x49		Metal lath & plaster—3.4# self-furring diamond mesh metal lath wrapped around column—1 3/4" STRUCTO-LITE plaster or 100:2-100:3 gypsum-perlite plaster— UL Des X402		SA-920 5
3-Hour Rated Applications				
W14 x228		Gypsum Drywall Fireprfg—1/2" SHEETROCK brand gypsum panels, FIRECODE C core, around col—double layer over ea web face—panels screw att to 158ST25 steel studs at col corners—met corner beads—joints fin— UL Des X514		SA-923 6
W14 x228		Gypsum Base & Veneer Finish Fireprfg—1/2" IMPERIAL FIRECODE C gypsum base around col—double layer over ea web face—base screw att to 158ST25 steel studs at col corners—met corner beads—1/8" veneer finish— UL Des X514		SA-920 7
W10 x49		Gypsum Drywall Fireprfg—3 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, around col—triple layer over ea flange end—inner layers on flange face separ by 158ST25 steel studs & screw att—met beads on corners—joints fin— UL Des X515		SA-923 8
W10 x49		Gypsum Base & Veneer Finish Fireprfg—3 layers 1/2" IMPERIAL FIRECODE C gypsum base around col—triple layer over ea flange end—inner layers on flange face separ by 158ST25 steel studs & screw att—met beads on corners—1/8" veneer finish— UL Des X515		SA-920 9
W10 x49		THERMAFIBER Mineral Fireprfg—dble layer 2" fireprfg around col att with stud welding pins or 12-ga. flange clips & clinch shields 16" o.c.— UL Des X306	Dry assembly, offers excellent insulation for exterior columns	SA-707 10
W10 x49		Metal lath & plaster—3.4# self-furring diamond mesh metal lath wrapped around column—1 3/4" 100:2-100:3 gypsum-perlite plaster or STRUCTO-LITE plaster— UL Des X402		SA-920 11
2-Hour Rated Applications				
W14 x228		Gypsum Drywall Fireprfg—1 layer—1/2" SHEETROCK brand gypsum panels, FIRECODE C core, around col—panel screw att to 158ST25 steel studs at col corners—met corner beads—joints fin— UL Des X521		SA-923 12

Column type	Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
2-Hour Rated Applications (continued)				
W14 x228		Gypsum Base & Veneer Finish Fireprfg— $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base around col—base screw att to 158ST25 steel stud at col corners—met corner beads— $\frac{1}{8}$ " veneer finish— UL Des X521		SA-920 13
W10 X49		Gypsum Drywall Fireprfg—2 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, around col—double layer over ea flange end—double layer on flange faces separ by 158ST25 steel stud & screw att—met beads on corners—joints fin— UL Des X518		SA-923 14
W10 x49		Gypsum Base & Veneer Finish Fireprfg—2 layers $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base around col—double layer over ea flange end—double layer on flange faces separ by 158ST25 steel studs & screw att—met beads on corners— $\frac{1}{8}$ " veneer finish— UL Des X518		SA-920 15
Varies		Gypsum Drywall Fireprfg—3 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, around col—triple layer over ea flange end—inner layers on flange face separ by 158ST25 steel studs & screw att—met beads on corners—joints fin— UL Des X524	Rating also applies to tapered or constant-section prefabricated metal building columns	SA-923 16
Varies		Gypsum Base & Veneer Finish Fireprfg—3 layers $\frac{1}{2}$ " IMPERIAL FIRECODE C gypsum base around col—triple layer over ea flange end—inner layer on flange face separ by 158ST25 steel studs & screw att—met beads on corners— $\frac{1}{8}$ " veneer finish— UL Des X524	Rating applies to tapered or constant-section prefabricated metal building columns	SA-920 17
W10 x49		THERMAFIBER Mineral Fireprfg—2 1/2" fireprfg around col att with stud welding pins or 12-ga. flange clips & clinch shields 24" o.c.— UL Des X305	Dry assembly; offers excellent thermal insulation for exterior columns	SA-707 18
W10 x49		Metal lath & plaster—3.4# self-furring diamond mesh metal lath wrapped around column—1" 100:2-100:3 gypsum-perlite plaster or STRUCTO-LITE plaster— UL Des X402		SA-920 19
1-Hour Rated Application				
W10 x49		Metal lath & plaster—3.4# self-furring diamond mesh metal lath wrapped around column— $\frac{3}{4}$ " 100:2-100:3 gypsum-sand plaster— BMS-92		SA-920 20
Beam Fireproofing				
4 hr. W12 x58		Metal Lath & Plaster Caged Beam Fireprfg—3.4# self-furring diamond mesh metal lath enclosing beam—1 1/2" 100:2 gypsum-perlite plaster— UL 40 UL8.16, UL Des D403	Suitable for protection of beams and girders	SA-920 21
3 hr. (beam only) W8 x24		Gypsum Drywall Caged Beam Fireprfg—1 3/4" stl run chan brackets 24" o.c.— $\frac{1}{2}$ " x 1 3/4" corner angles att to brackets—3 layers $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE core, att with Type S screws—1" 20-ga. hex mesh on bottom over middle layer—met beads on corners—joints fin—2 1/2" conc deck on fluted stl flr— UL Des N505	Extends drywall use to beam protection. Fire rating for restrained assembly; 2-hr. rating for unrestrained assembly	SA-923 22

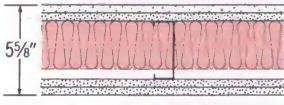
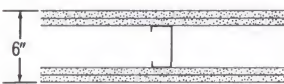
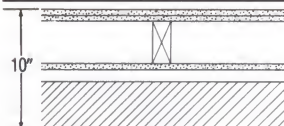

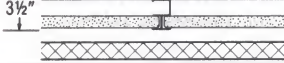

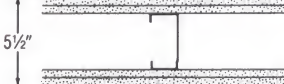
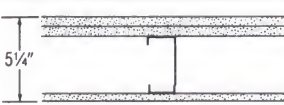


Column type	Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
Beam Fireproofing (continued)				
3 hr. (beam only)	W8 x24 	Gypsum Base & Veneer Finish Caged Beam Fireprfg—1 1/2" stl run chan brackets 24" o.c.—1/2" x 1 1/2" corner angles att to chan brackets—3 layers 5/8" IMPERIAL FIRECODE base att with Type S screws—1" 20-ga. hex mesh on bottom over middle layer—met beads on corners—joints taped—1/4" veneer finish—2 1/2" conc deck on fluted stl flr— UL Des N505	Fire rating for restrained assembly; 2-hr. rating for unrestrained assembly	SA-920 23
3 hr.	W8 x24 	THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 12" o.c.—2 1/2" conc deck on cellular stl flr— UL Des N304	Fire rating for restrained beam; unrestrained beam rating is 2-hr.	SA-707 24
2 hr. (beam only)	W8 x24 	Gypsum Drywall Caged Beam Fireprfg—1 1/2" stl run chan brackets 24" o.c.—1 1/2" x 1/2" corner angles att to chan brackets—dbl layer 5/8" SHEETROCK brand gypsum panels, FIRECODE core, att with Type S screws—met beads on corners—joints fin—2 1/2" conc deck on fluted stl flr— UL Des N501 (F)—UL Des N502	Design N502 based on 1 1/2" steel runner for corner angles and coped brackets	SA-923 25
2 hr. (beam only)	W8 x24 	Gypsum Base & Veneer Finish Fireprfg—1 1/2" stl run chan brackets—dbl layer 5/8" IMPERIAL FIRECODE base att with Type S screws—met beads on corners—1/4" veneer finish—2 1/2" conc deck on fluted stl flr— UL Des N501—UL Des N502	Design N502 based on 1 1/2" steel runner for corner angles and coped brackets	SA-920 26
2 hr.	W8 x13 	THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with stud welding pins or 12-ga. flange clips & clinch shields 16" o.c.—3 1/2" conc on fluted steel flr— UL Des D915	Fire rating is 1 1/2 hr. with cellular steel floor units	SA-707 27
2 hr.	W8 x24 	THERMAFIBER Mineral Fireprfg—2" around beam att with stud welding pins or 12-ga. flange clips & clinch shields 12" o.c.—2 1/2" conc on fluted stl flr— UL Des N304—UL Des N305	Fire rating is 1 1/2 hr. with cellular steel floor units	SA-707 28



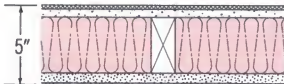
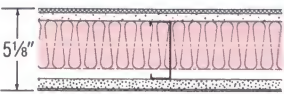
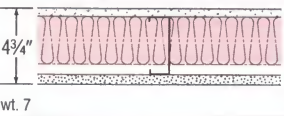
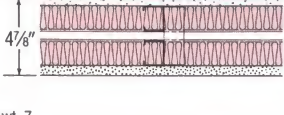
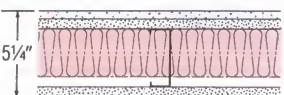
Column type	Physical data construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
Trench Header Duct				
3 hr. W6 x12		THERMAFIBER Mineral Fireprtg—1" fireprtg, 8.25 pcf, under flr deck and trench header—dbl layer 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, under trench header—triple layer 3" fireprtg around beam—fireprtg and panels att with stud welding pins & clinch shields—2 1/2" conc on fluted stl flr— UL Des D301	Includes 4-hr. beam. Fire rating 2 hr. (beam 3-hr.) with 6.50-pcf min. fireprtg— UL Des D302	SA-707 29

(See other System Folders Nos. SA-905, SA-920, SA-923 and United States Gypsum Company Technical Bulletin CS-6 for protection of beams, girders, and trusses by ceiling constructions.)

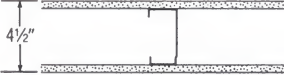
Exterior Walls

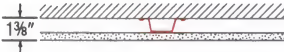




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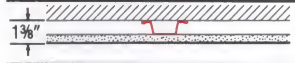

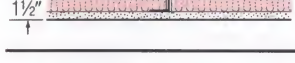
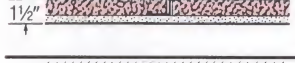



Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
2-Hour Rated Assemblies			
5 5/8" 	Steel Stud—1/2" DUROCK exterior cement board—base layer 1/2" SHEETROCK brand gypsum panels, FIRECODE C core—board screw-attached with 1 1/2" DUROCK steel screws 8" o.c. to 3 1/2" 20-ga. min. steel non-load bearing studs 16" o.c.—3" THERMAFIBER SAFB—joints taped—double-layer 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, interior— UL Des U474		SA-700 1
6" 	Dbl layer 1/2" SHEETROCK brand gypsum sheathing, FIRECODE core, exterior—35SJ20 studs 24" o.c.—dbl layer 1/2" SHEETROCK brand gypsum panels, FIRECODE core, interior—base layer att with 1" Type S-12 screws 12" o.c.—face layer att with 1 1/2" Type S-12 screws 12" o.c.—load bearing up to 80% allowable stud axial load— UL Des U425	Rating also applies with SHEETROCK brand gypsum panels, water-resistant, FIRECODE core, gypsum panel exterior	SA-923 2
10" 	Wd Stud—2 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE core, interior—1/2" SHEETROCK brand gypsum sheathing, and 4" brick masonry veneer exterior—2x4 16" o.c.—sheathing appl horiz with 11d galv nails 6" o.c.—SHEETROCK brand gypsum panels, appl horiz or vert with nails 8" o.c.—joints stag & fin— UL Des U302	Rating also applies with IMPERIAL FIRECODE Base and veneer finish interior.	SA-924 3
5 3/4" 	Exterior Curtain Wall—358ST20 steel studs 16" o.c.—1/2" gypsum sheathing—self-furring metal lath—1" cement-lime stucco exterior—3" THERMAFIBER fire safely FS-15 blankets betw studs—1/2" SHEETROCK brand gypsum panels, foil-back, FIRECODE C core, or IMPERIAL FIRECODE C gypsum base and 1/4" IMPERIAL veneer finish interior— T-4851-0SU	Systems offer wide selection of exterior and interior surfaces, utilizing conventional materials	SA-923 4
3 1/2" 	Exterior Curtain Wall—1" SHEETROCK brand gypsum liner panels set betw steel C-H studs 24" o.c. on exterior—2 layers SHEETROCK brand gypsum panels, FIRECODE C core, screw att on interior—joints fin— U of C 4-2-75	Rating also applies with IMPERIAL FIRECODE C base and veneer finish interior	SA-923 5
6 1/2" 	Glass-fiber reinforced concrete panels, 6'8 1/4" x 7'0", 1/2" thick, bolted to frame—40SJ16 studs 16" o.c. anchored to panel—5" THERMAFIBER CW-40 curtain wall insulation in cavity—double layer 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, interior—joints finished— CEG 4-23-82		SA-923 6
1 1/2-Hour Rated Assemblies			
5 1/2" 	Dbl layer 1/2" SHEETROCK brand gypsum sheathing, FIRECODE core, exterior—35SJ20 studs 24" o.c.—dbl layer 1/2" SHEETROCK brand gypsum panels, FIRECODE core, interior—base layers att with 1" Type S-12 screws 12" o.c.—face layers att with 1 1/2" Type S-12 screws 12" o.c.—load bearing up to 100% allowable stud axial load— UL Des U425		SA-923 7
5 1/4" 	1/2" SHEETROCK brand gypsum sheathing, exterior—35SJ20 studs 24" o.c.—dbl layer 1/2" SHEETROCK brand gypsum panels, FIRECODE core, interior—base layers att with 1" Type S-12 screws 12" o.c.—face layers att with 1 1/2" Type S-12 screws 12" o.c.—load bearing up to 100% allowable stud axial load— UL Des U425	Rating applicable to fire exposure on interior face only	SA-923 8
6" 	Glass-fiber reinforced concrete panels, 6'8 1/4" x 7'0", 1/2" thick, bolted to frame—40SJ16 steel studs 16" o.c. anchored to panel—5" THERMAFIBER CW-40 curtain wall insulation in cavity—1/2" SHEETROCK brand gypsum panels, FIRECODE C core, interior screw-attached to studs—joints finished— CEG 2-3-82		SA-923 9
1-Hour Rated Assemblies			
4 3/4" 	1/2" SHEETROCK brand gypsum sheathing, FIRECODE core, exterior—35SJ20 studs 24" o.c.—1/2" SHEETROCK brand gypsum panels, FIRECODE core, interior—panels appl vert & att with 1" Type S-12 screws 12" o.c.—load bearing up to 100% allowable stud axial load— UL Des U425	Rating also applies with SHEETROCK brand gypsum panels, water-resistant, FIRECODE core, exterior	SA-923 10

Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
1-Hour Rated Assemblies (continued)			
	35SJ20 studs 24" o.c.— $\frac{1}{2}$ " gypsum sheathing—1" extruded polystyrene insul installed horiz— $\frac{1}{2}$ " cedar plywood exterior— $\frac{3}{8}$ " THERMAFIBER FS-15 insul blkts betw studs— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core, interior—joints fin— CE6 11-9-79		SA-923 11
	Wd Stud— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core, interior—1" extruded polystyrene insul sheathing and $\frac{1}{2}$ " plywd siding—2x4 16" o.c.— $\frac{3}{8}$ " THERMAFIBER FS-15 insul blkts—sheathing appl horiz with 1 $\frac{1}{2}$ " galv nails 12" o.c.—gypsum panels appl vert with 6d cem ctd nails 7" o.c.—joints fin— CE6 12-5-79		SA-924 12
	Wd Stud— $\frac{1}{2}$ " DUROCK exterior cement board and $\frac{1}{4}$ " ceramic tile exterior—board att with 1 $\frac{1}{2}$ " DUROCK wood screws or 1 $\frac{1}{2}$ " hot dipped galvanized roofing nails 8" o.c.—2 x 4 wood load bearing studs spaced 16" o.c.— $\frac{3}{8}$ " THERMAFIBER FS-15 insulation between studs— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core, or IMPERIAL FIRECODE gypsum base and $\frac{1}{8}$ " IMPERIAL finish interior— UL Des U329		SA-700 13
	Steel stud— $\frac{1}{2}$ " DUROCK exterior cement board and $\frac{1}{4}$ " ceramic tile exterior—board screw-attached with 1 $\frac{1}{4}$ " DUROCK steel screws 8" o.c. to 3/8" 20-ga. min. steel non-load bearing studs spaced 16" o.c.—3" THERMAFIBER SAFB insulation between studs— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core, or IMPERIAL FIRECODE gypsum base and $\frac{1}{8}$ " IMPERIAL finish interior— UL Des U442		SA-700 14
	Steel Stud— $\frac{1}{2}$ " DUROCK exterior cement board—3/8" 20-ga. min. steel non-load bearing studs 16" o.c.—3" min. THERMAFIBER SAFB—board att with 1 $\frac{1}{4}$ " DUROCK steel screws 8" o.c.—joints taped— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core— UL Des U457		SA-700 15
	Steel Stud— $\frac{1}{2}$ " DUROCK exterior cement board—1 1/4" 20-ga. min. steel non-load bearing studs 16" o.c. in two rows with horiz. braces—1 1/4" THERMAFIBER SAFB in both stud cavities—board att with 1 $\frac{1}{4}$ " DUROCK steel screws 8" o.c.—joints taped— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE C core— UL Des U458		SA-700 16
	Steel Stud— $\frac{1}{2}$ " DUROCK exterior cement board—base layer $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core—board screw-attached with 1 $\frac{1}{4}$ " DUROCK steel screws 8" o.c. to 3/8" 20-ga. min. steel load-bearing studs 16" o.c.—3" THERMAFIBER SAFB—joints taped— $\frac{3}{8}$ " SHEETROCK brand gypsum panels, FIRECODE core, interior— UL Des U473		SA-700 17

45-Min. Rated Assembly

	$\frac{1}{2}$ " SHEETROCK brand gypsum sheathing, FIRECODE core—35SJ20 studs 24" o.c.— $\frac{1}{2}$ " SHEETROCK brand gypsum panels, FIRECODE C core, interior—panels appl vert & att with 1" Type S-12 screws 12" o.c.—load bearing up to 100% allowable stud axial load— UL Des U425		SA-923 18
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Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
Drywall Assemblies			
	Metal furring channels 24" o.c., $\frac{1}{2}$ " SHEETROCK brand gypsum panels, foil-back, screw attached, joints finished	Good vapor retarder, no limiting height	SA-923 1
	Wood furring strips 16" o.c., $\frac{1}{2}$ " SHEETROCK brand gypsum panels, foil-back, joints finished	Surface not isolated from structural stresses	SA-924 2
	SHEETROCK Z-furring channels appl vert 24" o.c., THERMAFIBER fire safety FS-15 blankets betw chan, $\frac{1}{2}$ " SHEETROCK brand gypsum panels, foil-back, screw attached to channels, joints finished	Suitable for up to 3" thick insulation; good vapor retarder; no limiting height	SA-923 SA-924 3
	Steel studs 24" o.c., $\frac{1}{2}$ " SHEETROCK brand gypsum panels, foil-back, screw attached, joints finished	Free standing for pipe chase clearance; good vapor retarder	SA-923 4
	SHEETROCK Z-furring channels appl vert 24" o.c., rigid plastic foam insulation betw chan, $\frac{1}{2}$ " SHEETROCK brand gypsum panels, foil-back, appl vert and screw-attached to channels, joints finished	Suitable for up to 3" thick insulation no limiting height	SA-923 5

Physical data Construction detail	Fire-rated construction Description & test no.	Comments	Folder reference
	SHEETROCK brand gypsum liner panels screw-attached to steel angle runners, 1" USG H-splines 24" o.c., 1/2" SHEETROCK brand gypsum panels, foil-back, screw-attached to H-splines, joints finished	Free-standing for pipe chase clearance, good vapor retarder	SA-926 6
Plaster Assemblies			
	Metal furring channels 16" o.c., 1/2" IMPERIAL gypsum base, foil-back, screw-attached to channels, 1/4" veneer finish	Good vapor retarder, no limiting height	SA-920 7
	Steel studs 16" o.c. set in runners, 1/2" IMPERIAL gypsum base, foil-back, screw-attached to studs, 1/4" veneer finish	Free-standing, allows for pipe chase clearance, good vapor retarder.	SA-920 8
	SHEETROCK Z-furring channels appl vert 24" o.c., THERMAFIBER fire safety FS-15 blankets betw chan, 1/2" IMPERIAL gypsum base, foil-back, screw-attached to channels, 1/4" veneer finish	Noncombustible, good vapor retarder, no limiting height	SA-920 9
	SHEETROCK Z-furring channels appl vert 24" o.c., rigid plastic foam insulation betw chan, 1/2" IMPERIAL gypsum base, foil-back, screw-attached to channels, 1/4" veneer finish	Suitable for up to 3" thick insulation, no limiting height	SA-920 10
	Steel studs 16" o.c. set in runners, 3/8" ROCKLATH base attached with 1" Type S screws, 1/2" sanded basecoat plaster, lime putty finish	Free standing; allows for pipe chase clearance; good vapor retarder.	SA-920 11
	SHEETROCK Z-furring channels applied vertically 16" or 24" o.c., THERMAFIBER fire safety FS-25 blankets between channels, 3/8" ROCKLATH base attached with 1" Type S screws, 1/2" sanded basecoat plaster, lime putty finish	Noncombustible; system with mineral fiber insulation; suitable for up to 3" thick insulation; no limiting height.	SA-920 12
	SHEETROCK Z-furring channels applied vertically 16" or 24" o.c., rigid plastic foam insulation between channels, 3/8" ROCKLATH base attached with 1" Type S screws, 1/2" sanded basecoat plaster, lime putty finish	Suitable for up to 3" thick insulation; no limiting height.	SA-920 13

Curtain Walls

Fire containment ⁽¹⁾	Curtain wall type	Description & test no.	Folder reference
5 hr ⁽²⁾	alum spandrel	Panel 5'x6'8", 1/2" thick, bolted to alum angle frame—2" THERMAFIBER CW-90 curtain wall insulation—alum weld-on pins with speed clips approx 12" o.c.— CEG 3-29-74	SA-707 1
3 hr.	alum spandrel	Panel 4'x6'9", 0.123 thick, bolted to frame—3" THERMAFIBER CW-70 foil-faced curtain wall insulation—1/2" alum weld-on pins with speed clips spaced 14" vert and 12" horiz— USG 11-30-71	SA-707 2
3 hr.	glass spandrel	Tempered vision-glass panel, 3'2"x6'2 1/2", 1/2" thick, in alum frame—2" THERMAFIBER CW-90 dark curtain wall insulation—weld-on pins with speed clips at top and bottom— CEG 4-2-81	SA-707 3
3 hr	alum mullion granite panel	Granite spandrel panel, 1 1/4" thick, kerfed top and bottom and inserted in alum extrusions secured to alum mullions at 5' o.c.—recessed 2" CW-90 Foil-Faced Curtain Wall insulation screw attached with sheet metal shields at 12" o.c. to 1 1/2" x 1 1/2" 20 ga. galv steel angles screw attached to mullions—mullions covered with 6" wide, 1" thick CW-90 Foil-Faced Curtain Wall insulation screw attached 12" o.c.— CEG 4-23-90	SA-707 4
2 hr.	alum mullion glass panel	Tempered glass panel, 1 1/4" thick, secured to alum mullions at 5' o.c. with pressure plates—recessed 2" CW-90 Foil-Faced Curtain Wall insulation screw attached with sheet metal shields at 12" o.c. to 1 1/2" x 1 1/2" x 1 1/2" alum angles screw attached to mullions—mullions covered with 6" wide, 1" thick CW-90 Foil-Faced Curtain Wall insulation screw attached 12" o.c.— CEG 12-20-89	SA-707 5
2 hr.	alum mullion glass panel	Same as above except that safing between furnace and assembly was sealed with 4" thick THERMAFIBER safing and topped off with 1" THERMAFIBER SMOKE SEAL compound in lieu of safing clips— CEG 1-16-90	SA-707 6
2 hr.	glass spandrel	Tempered glass panel, 4'8"x5'9", 1/2" thick, in alum frame—2" THERMAFIBER CW-90 foil-faced curtain wall insulation—weld-on pins with speed clips— WJE-72481	SA-707 7
2 hr.	alum spandrel	Panel 4'x6'9", 0.247" thick, bolted to frame—2" THERMAFIBER CW-40 foil-faced curtain wall insulation—8d alum-nail, weld-on pins with speed clips spaced 14" vert and 12" horiz— USG 10-18-71	SA-707 8
2 hr.	alum spandrel	Panel 5'0"x6'9", 1/2" thick, bolted to frame—2" THERMAFIBER CW-90 curtain wall insulation—weld-on pins with speed clips approx. 12" o.c.— WJE-72455	SA-707 9
2 hr.	alum mullion granite panel	Panel, 1 1/4" thick, kerfed top and bottom and inserted in alum extrusions secured to alum mullions at 5' o.c.—recessed 2" CW-90 Foil-Faced Curtain Wall insulation screw attached with sheet metal shields at 12" o.c. to 1 1/2" x 1 1/2" 20 ga. galv steel angles screw attached to mullions—mullions covered with 6" wide, 1" thick CW-90 Foil-Faced Curtain Wall insulation screw attached 12" o.c.— CEG 1-15-90	SA-707 10
2 hr.	granite panel	Panel, 1 1/4" thick, secured to 2 1/2"x2 1/2"x1/2" steel angle frame 3'8"x6'6"—2" THERMAFIBER CW-90 foil-faced curtain wall insulation—weld-on pins with speed clips spaced 12" o.c. around frame— CEG 10-6-81	SA-707 11

F Curtain Walls

Fire containment ⁽¹⁾	Curtain wall type	Description & test no.	Folder reference	
2 hr.	glass-fiber reinforced concrete panel	GFRC panels, 6'8 1/4"x7'0" 1/2" thick, bolted to frame—4" steel studs anchored to panel—5" THERMAFIBER CW-40 curtain wall insulation in cavity—2 layers 1/2" SHEETROCK brand gypsum panels, FIRECODE C core, screw att to studs— CEG 4-23-82	SA-707	12
1 1/2 hr.	glass-fiber reinforced concrete panel	GFRC panels 6'8 1/4"x7'0" 1/2" thick, bolted to frame—4" steel studs anchored to panel—5" THERMAFIBER CW-40 curtain wall insulation in cavity—3/4" SHEETROCK brand gypsum panels, FIRECODE C core, screw att to studs— CEG 2-3-82	SA-707	13
1 hr.	alum spandrel	Exterior alum and steel panel 4'5"x6'9" secured in frame—1 1/4" THERMAFIBER CW-90 curtain wall insulation—impaling pins and speed clips near center and top— USG 6-3-71	SA-707	14
1 hr.	alum mullion glass panel	Heat-strengthened black glass panel 3'3"x5'9", 1/4" thick, an alum mullion frame—2" THERMAFIBER CW-90 foil-faced curtain wall insulation inserted in mullions—support clips at floor slab— CEG 8-6-81	SA-707	15
1 hr.	alum mullion granite panel	Panel, 1 1/4" thick, inserted in alum mullion frame 3'7"x6'8"—horiz met fur chan betw mullions—2 1/2" THERMAFIBER CW-40 curtain wall insulation behind chan—3/4" SHEETROCK brand gypsum panels, FIRECODE C core, appl vert & screw att to chan— CEG 7-27-81	SA-707	16
1 hr.	alum mullion glass panel	Tempered solar gray glass panel 5'1 1/4"x6'x10", 1/4" thick, set in alum-mullion frame—2"x4'x5' THERMAFIBER CW-90 curtain wall insulation—wire impaling devices with speed clips 24" o.c.— CEG 7-25-75	SA-707	17

(1) Times shown not to be construed as end points. (2) Conducted to establish an end-point for THERMAFIBER insulation in a typical curtain wall assembly, but after 5 hr. 5 min. without failure or physical change (except color), test was terminated to avoid furnace damage. Folder reference: SA-707.

G Access Floor Systems

Office and Computer Room Systems

PERFORMANCE

Rated Rolling Load (Lbs.)	Rated Concentrated Load (Lbs.)	Rated Ultimate Load (Lbs.)	Impact Load (Lbs.)	Recommended Finished Floor Height	APPLICATION	SYSTEM		Folder Reference	
						Panel	Understructure		
Intermediate Loads									
SOLIDFEEL II Panels									
600	800	2300	100	Up to 24"	Offices	SF-800	CORNERLOC	SA-1027	1
600	800	2400	100	Up to 18"	Offices	SF-800	FreeStanding	SA-1027	2
600	800	3000	100	Up to 36"	Offices	SF-800	Edge Support Rigid Grid	SA-1027	3
800	1000	3000	125	Up to 24"	Offices	SF-1000	CORNERLOC	SA-1027	4
800	1000	3300	125	Up to 18"	Offices, Computer Rooms	SF-1000	FreeStanding	SA-1027	5
800	1000	3500	125	Up to 36"	Computer Rooms	SF-1000	Edge Support Rigid Grid	SA-1027	6
800	1000	3400	125	Up to 24"	Computer Rooms	SF-1000	SNAP-LOC	SA-1027	7
All-Steel Panels									
400	1000	2600	100	Up to 24"	Offices	AS-1000	CORNERLOC	SA-1027	8
400	1000	3000	100	Up to 18"	Offices, Computer Rooms	AS-1000	FreeStanding	SA-1027	9
400	1000	4000	100	Up to 36"	Computer Rooms	AS-1000	Edge Support Rigid Grid	SA-1027	10
400	1000	3100	100	Up to 24"	Computer Rooms	AS-1000	SNAP-LOC	SA-1027	11
WOOD-LOK Panels									
600	1000	2000	120	Up to 24"	Offices	WL-1000	WOOD-LOK	SA-1027	12
WOOD-COR Panels									
800	1000	2800	120	Up to 36"	Computer Rooms	WC-1000	WOOD-COR Rigid Grid	SA-1027	13
600	1000	2200	120	Up to 24"	Computer Rooms	WC-1000	WOOD-COR SNAP-LOC	SA-1027	14
600	1000	2000	120	Up to 18"	Computer Rooms	WC-1000	WOOD-COR FreeStanding	SA-1027	15
Heavy Loads									
SOLIDFEEL II Panels									
1000	1250	3200	150	Up to 24"	Offices	SF-1250	CORNERLOC	SA-1027	16
1000	1250	3400	150	Up to 18"	Offices, Computer Rooms	SF-1250	FreeStanding	SA-1027	17
1000	1250	4200	150	Up to 36"	Computer Rooms	SF-1250	Edge Support Rigid Grid	SA-1027	18
1000	1250	3500	150	Up to 24"	Computer Rooms	SF-1250	SNAP-LOC	SA-1027	19
All-Steel Panels									
500	1250	2800	110	Up to 24"	Offices	AS-1250	CORNERLOC	SA-1027	20
500	1250	3500	110	Up to 18"	Offices, Computer Rooms	AS-1250	FreeStanding	SA-1027	21
500	1250	4700	110	Up to 36"	Computer Rooms	AS-1250	Edge Support Rigid Grid	SA-1027	22
500	1250	3800	110	Up to 24"	Computer Rooms	AS-1250	SNAP-LOC	SA-1027	23

PERFORMANCE

Rated Rolling Load (Lbs.)	Rated Concentrated Load (Lbs.)	Rated Ultimate Load (Lbs.)	Impact Load (Lbs.)	Recommended Finished Floor Height	APPLICATION	SYSTEM		Folder Reference	
						Panel	Understructure		
Mark 30 Panels									
500	1250	2500	120	Up to 36"	Computer Rooms	MK-1250	Mark 30 Rigid Grid	SA-1027	24
500	1250	2500	120	Up to 24"	Computer Rooms	MK-1250	Mark 30 SNAP-LOC	SA-1027	25
Extra-Heavy Loads									
SOLIDFEEL II Panels									
1200	1500	3500	175	Up to 24"	Offices	SF-1500	CORNERLOC	SA-1027	26
1200	1500	5000	175	Up to 36"	Computer Rooms	SF-1500	Edge Support Rigid Grid	SA-1027	27
1200	1500	4000	175	Up to 24"	Computer Rooms	SF-1500	SNAP-LOC	SA-1027	28
2000	2000	6000	200	Up to 36"	Computer Rooms	SF-2000	Edge Support Rigid Grid	SA-1027	29
All-Steel Panels									
600	1500	3000	120	Up to 24"	Offices	AS-1500	CORNERLOC	SA-1027	30
600	1500	4900	120	Up to 36"	Computer Rooms	AS-1500	Edge Support Rigid Grid	SA-1027	31
600	1500	4400	120	Up to 24"	Computer Rooms	AS-1500	SNAP-LOC	SA-1027	32
Mark 30 Panels									
600	1500	3000	120	Up to 36"	Computer Rooms	MK-1500	Mark 30 Rigid Grid	SA-1027	33
600	1500	3000	120	Up to 24"	Computer Rooms	MK-1500	Mark 30 SNAP-LOC	SA-1027	34

Rated system loads shown are recommended by USG Interiors and tested in accordance with CISCA Testing Standards.

Title	Folder reference
Steel Framing Systems: Technical Information	UN-30
A complete line of construction steel products; product descriptions, structural properties, physical properties, limiting heights and other technical information.	
DUROCK Exterior Cement Board Systems.....	SA-700
Lightweight, fire-resistant assemblies for steel-framed and wood-framed exteriors; cement board serves as base for DUROCK Exterior Finish, ceramic tile, thin brick, stone aggregate, and exterior insulation and finish system.	
THERMAFIBER Life-Safety Fire Containment Systems	SA-707
Curtain wall and safing insulation for fire-containment in high-rise buildings; sound attenuation fire blankets for outstanding thermal and sound control insulation; structural fireproofing.	
USG Fire Stop Systems for Floor and Wall Penetrations	SA-727
Systems combine FIRECODE Compound and THERMAFIBER Safing Insulation to provide wall and floor through-penetration firestops that combine exceptional economy and performance.	
DONN Ceiling Suspension Systems	SA-904
DONN grid products, the most complete selection of suspension systems in the commercial building industry; exposed, narrow, concealed and special use ceiling suspension systems.	
Ceiling Systems.....	SA-905
ACOUSTONE and AURATONE mineral acoustical tile and panels; special-function tile and panels; gypsum ceiling board; fire protection and sound attenuation accessories.	
INTEGRATED CEILINGS Specialty Products.....	SA-906
Specialty ceiling and wall products.	
INTEGRATED CEILINGS Special Order Products	SA-907
Made-to-order ceiling products.	
Plaster Products, Accessories & Systems	SA-920
Veneer basecoat and finish plasters; conventional basecoat, finish coat, and gauging plasters; accessories.	
USG High Sound-Attenuation Steel Framed Systems	SA-921
Double wall sound isolation without the cost or space required for two structural systems; ideal for party walls, mechanical equipment rooms, theaters, studios and music buildings. Also, highly sound attenuating partitions for party, chase and furring walls.	
Drywall/Steel Framed Systems	SA-923
Fire-resistant interior and exterior steel framed drywall systems; partitions, chase walls, resilient partitions, curved drywall partitions, soffits, floors, ceilings, column and beam fireproofing.	
Drywall/Wood Framed Systems	SA-924
Basic gypsum drywall assemblies offer economical, quickly erected, load-bearing partitions, walls and ceilings wherever fire protection is desired with wood framing.	
USG Area Separation Wall Systems	SA-925
Lightweight, non-load bearing gypsum drywall assemblies designed as vertical fire barriers for fire walls and party walls in wood-frame apartments and townhouses.	

Title	Folder reference
USG Cavity Shaft Wall Systems	SA-926
Fire-resistant drywall partitions for enclosing shafts in multi-story buildings; engineered design provides a thin, lightweight assembly that offers faster installation and lower material costs.	
Gypsum Panels & Accessories	SA-927
Gypsum panels, coreboard, sheathing; metal and plastic trim, brackets, control joints; screws and adhesives; joint treatments.	
TEXTONE Vinyl-Faced Gypsum Panels.....	SA-928
Predecorated vinyl-faced gypsum panels; mouldings and accessories.	
DUROCK Interior Cement Board Systems	SA-932
Ceramic tile backer board for interior walls, ceilings, floors, counter tops; adhesives, mortars, grouts.	
Texture and Finish Products.....	SA-933
Ready-mixed and powder texture finishes; spray acoustical finish.	
Wall Systems	SA-1020
Relocatable partitions for commercial, institutional, and industrial applications meet range of requirements for performance, appearance, flexibility and cost control.	
DONN Access Floor Systems	SA-1027
Access floor systems for offices and computer rooms; electrical outlet systems; air distribution; floor coverings; accessories.	
STRUCTOCORE Security Wall Systems	SA-1119
Steel forming for security walls, prison cells, high-abuse walls; steel mesh design properties; details and specifications.	

The listings below contain existing Standard Specifications, classified as Federal or ASTM, which apply to USG Corporation materials. Where ASTM, local codes, etc. require product variance, consult your local representative.

Studs, runners and other steel accessories for drywall, plaster and load-bearing construction are produced for United States

Product	Federal specification	ASTM designation
Plaster		
RED TOP gypsum plaster	—	C28—gypsum neat plaster
RED TOP two-purpose plaster	—	C28—gypsum neat plaster
RED TOP wood fiber plaster	—	C28—gypsum wood fiber
STRUCTO-LITE plaster	—	C28—gypsum ready mix plaster
perlite aggregate	—	C35
RED TOP gauging plaster	—	C28—gypsum gauging for finish coat
RED TOP keenes cement regular quick trowel	—	C61
STRUCTO-GAUGE plaster	—	C28—gypsum gauging for finish coat
STRUCTO-BASE plaster	—	C28—gypsum neat plaster
IMPERIAL plaster	—	C587—gypsum veneer plaster
DIAMOND plaster	—	C587—gypsum veneer plaster
Gypsum lathing		
ROCKLATH plaster base ½" & ⅝"	—	C37
IMPERIAL gypsum base ½" & ⅝"	—	C588
Lime		
RED TOP and GRAND PRIZE finish limes	—	C206 type N
IVORY finish lime	—	C206 type S
RED TOP masons hydrate	—	C207 type N
Gypsum panels		
SHEETROCK brand (plain) (foil-back)	—	C36
SHEETROCK brand sq. edge	—	C36
SHEETROCK brand tap. edge	—	C36
SHEETROCK brand bev. edge	—	C36
¾" SHEETROCK brand FIRECODE core	—	C36
SHEETROCK brand FIRECODE C core	—	C36
TEXTONE vinyl-covered	—	C960
SHEETROCK brand water-resistant	—	C630
SHEETROCK brand gypsum coreboard panels	—	C442
SHEETROCK brand exterior gypsum ceiling board	—	C931
SHEETROCK brand interior gypsum ceiling board	—	C36

Gypsum Company by Unimast Incorporated of Fremont, Ohio. Upon request United States Gypsum Company will provide product certification that these products confirm to the applicable U.S. Gypsum and ASTM standards and meet the performance values identified herein.

Product	Federal specification	ASTM designation
Sheathing		
SHEETROCK brand gypsum sheathing	—	C79
Joint treatment		
SHEETROCK joint compounds	—	C475
Firestopping		
FIRECODE Compound	—	E814
Drywall accessories		
SJ studs, CR runners	QQ-S-775E type I, class e (steel)	C645, C955, A568 A525 (galv. coating), A792 (alum.-zinc coating), A591 (galv. coating)
ST25/22 studs, CR25/22 runners	QQ-S-775E, type 1, class f (steel)	C645, A568 (steel), A525 (galv. coating), A463 (alum. coating), A792 (alum.-zinc coating) A591 (galv. coating)
ST20 studs, CR20 runners	QQ-S-775E, type 1, class e	C645, A568 (steel), A446 (steel), A525 (galv. coating), A792 (alum.-zinc coating), A591 (galv. coating)
RC-1 resilient channels	QQ-S-775E, type 1, class f (steel)	A568 (steel), A525 (galv. coating), A792 (alum.-zinc coating)
Shaft wall/area separation wall studs	—	A446 (steel) A525 (galv. coating) A792 (alum.-zinc coating) A591 (galv. coating)
Drywall screws	—	C1002 (type S)
SUPER-TITE screws	—	C954 (type S-12 and SUPER-TITE DRILLERS)
SHEETROCK acoustical sealant	—	C919
Acoustical units—prefabricated		
ACOUSTONE	—	C423, C523, C635, C636, C117, E84, E119, E1264
AURATONE	—	
Ceiling suspension system		
DONN Grid	—	C635, C636, C645, C841, E119, E1264
Mineral fiber insulation		
THERMAFIBER		
open face batt (membrane facing one side)	—	C665
blanket batt (with enveloping membranes)	—	C665
blowing wool	—	C612
pouring wool	—	C612
sound atten. fire blanket	—	C665
THERMAFIBER		
safing insulation	—	C665
curtain wall insulation	HH-I-558B Form A, classes 1 & 2	
mineral felt fireproofing	—	

Products/UL Designations

Product	UL Designation
SHEETROCK brand Gypsum Panels	R
SHEETROCK brand Gypsum Panels, FIRECODE Core	SCX
SHEETROCK brand Gypsum Panels, FIRECODE C Core	C
SHEETROCK brand Gypsum Panels, FIRECODE Core, Water-Resistant	WRX
SHEETROCK brand Gypsum Panels, FIRECODE C Core, Water-Resistant	WRC
SHEETROCK brand Gypsum Liner Panels	SLX
SHEETROCK brand Gypsum Sheathing, FIRECODE Core	SHX
SHEETROCK brand Gypsum Panels, FIRECODE Core, Vinyl-Covered	FCV
SHEETROCK brand Formboard	FB
IMPERIAL Plaster Base	IPR
IMPERIAL Plaster Base (Type X)	IP-X1
IMPERIAL Plaster Base (Type C)	IP-X2
DUROCK Interior Cement Board	ICB
DUROCK Exterior Cement Board	ECB
ULTRAWALL Panel (Type C)	UC
ACOUSTONE Type AP Ceiling Product	AP
ACOUSTONE Type G Ceiling Product	G
ACOUSTONE Type W Ceiling Product	W
Surface Perforated Ceiling Product	S
AURATONE FIRECODE Type GR Ceiling Product	GR
AURATONE FIRECODE Type GR-1 Ceiling Product	GR-1
AURATONE FIRECODE Type FR-81 Ceiling Product	FR-81
AURATONE FIRECODE Type FR-83 Ceiling Product	FR-83
AURATONE METAL FACE Ceiling Product	M
CERAMIC HERITAGE Ceiling Product	FR-4

Sales Offices

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Georgia:	Atlanta, (404) 393-0770
Hawaii:	Honolulu, (808) 538-7712
Illinois:	Chicago, (312) 606-5845
Indiana:	Indianapolis, (317) 848-1513
Louisiana:	New Orleans, (504) 241-2020
Maryland:	Baltimore, (301) 355-2200
Massachusetts:	Charlestown, (617) 241-8530
Michigan:	Southfield, (313) 569-1900
Minnesota:	Bloomington, (612) 854-4233
Missouri:	St. Louis, (314) 349-0980
New York:	Albany, (518) 458-7437 Oakfield, (716) 948-5287 Stony Point, (914) 786-2820
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Ohio:	Chesterland, (216) 729-1956
Oregon:	Beaverton, (503) 626-8864
Pennsylvania:	Pittsburgh, (412) 341-2434
Tennessee:	Nashville, (615) 361-8419
Texas:	Dallas, (214) 490-0771 Houston, (713) 666-0751
Utah:	Salt Lake City, (801) 266-4975
Virginia:	Richmond, (804) 285-7528
International Division:	Chicago, (312) 606-5840
Technical Services:	Contact the following offices for technical assistance concerning design, materials, systems, detailing and specifications.
Eastern Region:	Atlanta, GA (404) 393-0770 Tarrytown, NY (914) 332-8000
Western Region:	Chicago, IL (312) 606-5788 Glendale, CA (818) 956-1882

List of Code Research Reports

ICBO	
Report No. 1602	Regular and Resilient Gypsum Construction and Triple-Sealed Sheathing
Report No. 1774	Two-, Three- and Four-Hour Gypsum Panel Steel Column Protection
Report No. 1820	SHEETROCK brand Gypsum Panels, Water-Resistant
Report No. 2240	SHEETROCK brand Exterior Gypsum Ceiling Board
Report No. 2331	THERMAFIBER Insulation Products
BOCA	
Report No. 87-63	USG Area Separation Fire Wall/Party Wall
SBCCI	
Report No. 72136	Fire Resistive Construction
Report No. 9033	Area Separation Wall
National Evaluation Service*	
NER-211	USG Steel Framing Systems
NER-258	USG Drywall Shaft Partition Systems
NER-259	DUROCK Interior Cement Board Systems
NER-396	DUROCK Exterior Cement Board Systems

* Recognized by ICBO, BOCA and SBCCI.

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Southwest:	Dallas, TX (214) 490-0355
South Pacific:	Orange, CA (714) 978-0901
Gulf Coast:	Orlando, FL (407) 851-9485
Great Lakes:	Westlake, OH (800) 777-8744
North Pacific:	Pleasanton, CA (415) 460-8470

Ceilings

Customer Relations Centers: 800-950-3839

Walls

Technical Services: Medina, OH (216) 722-8773

Access Floors

Technical Services: Red Lion, PA (717) 244-4071

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(800) 522-3666

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